

ORGANIZATIONAL, INTERMEDIATE AND DEPOT MAINTENANCE**DESCRIPTION AND PRINCIPLES OF OPERATION****A/P28S-24 PERSONNEL PARACHUTE ASSEMBLY****PART NO. MBEU10030PA-4****List of Effective Work Package Pages**

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Reference Material

Illustrated Parts Breakdown WP 018 04

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Record of Applicable Technical Directives

None

1. DESCRIPTION.

2. GENERAL.

a. The A/P28S-24 Personnel Maneuverable, Recovery Parachute Assembly is integral to the SJU-5/A and SJU-6/A Aircrew Automated Ejection Seat Escape System. The SJU-5/A is installed in the F/A-18A aircraft and both the SJU-5/A and SJU-6/A are installed in the F/A-18B, (C and D lot twelve only) aircraft. The A/P28S-24 is an aircraft inventory item.

b. The A/P28S-24 parachute assembly contains a 17 ft. inflated diameter, multicolored (white, olive green, international orange and sand shade) aeroconical canopy, type 1000. It is constructed with 20 gores, the canopy is modified with water deflation pockets on alternate gores. The duplex drogue parachute assembly is attached to and packed with the aeroconical canopy.

c. The canopy has two orifices in the rear to provide forward thrust/horizontal velocity. The orifices are located 90-degrees apart in gores numbered 4 and 18, and are covered with terylene netting.

d. Two steering lines provide directional control during descent. These steering lines are permanently attached to suspension lines numbered 4 and 17, opposite the orifices and about 24-in. above the connector links. Lower ends of steering lines, which have hand loops, are temporarily attached to the rear risers.

e. The drogue parachute assembly consists of a 5 ft. diameter cotton stabilizer drogue and a 22-in. diameter cotton controller drogue.

f. The aeroconical canopy and the duplex drogue parachute assemblies are packed in a rigid container which is also the headrest for the ejection seat. The parachute container is constructed of light alloy metal and has two sets of fabric closure flaps.

g. The outer set of flaps are attached to the top edge of the container; the inner set of flaps are located 4-in. below the outer set. The suspension lines and canopy are packed below the inner set of flaps. The drogue parachute assemblies are packed below the outer flaps.

h. The PCU-33/P or PCU-56/P parachute restraint harness assembly integrates the aircrew's parachute restraint harness, lapbelt assembly, shoulder restraint harness and survival vest.

i. While seated in the ejection seat, the aircrewmember connects the canopy releases on the risers to the adapters on PCU-33/P or PCU-56/P parachute restraint

harness assembly. The lapbelt release assembly on rigid seat survival kit SKU-3/A is connected to the lapbelt quick-release adapter on the PCU-33/P or PCU-56/P parachute restraint harness.

3. CONFIGURATION.

a. The only authorized configuration of the A/P28S-24 assembly is shown in (Figure 1). Refer to Illustrated Parts Breakdown (WP 018 04) for detailed information on configurations.

NOTE

The US Navy Blue Angels Flight Demonstration Team Aircraft are not required to have the Parachute Harness Sensing Release Units (PHSRU) installed.

4. SUBASSEMBLY CONFIGURATIONS.

a. The subassemblies listed below make up the A/P28S-24 and are shown in (Figure 2). Refer to (WP 018 04) for detailed information on subassemblies.

22-in. Drogue Parachute Assembly

5 ft. Drogue Parachute Assembly

Parachute Withdrawal Line Assembly

Riser Assembly and Cross-Connector Straps

Canopy Assembly and Vent Control Lines

Headrest Box/Personnel Parachute Container

Suspension Line Stowage Tray

Parachute Harness Sensing Release Units (PHSRU)

5. PRINCIPLES OF OPERATION.

6. AUTOMATIC OPERATION ABOVE 13,000 FT. ALTITUDE.

a. When an aircrew ejects from aircraft above the ejection seat predetermined aircrew/seat separation altitude, the following functions take place:

(1) The ejection seat drogue gun fires a piston deploying a 22-in. controller drogue. The controller drogue parachute in turn, deploys a 5 ft. stabilizer drogue. The 5 ft. drogue parachute assembly decelerates and stabilizes the seat during descent.

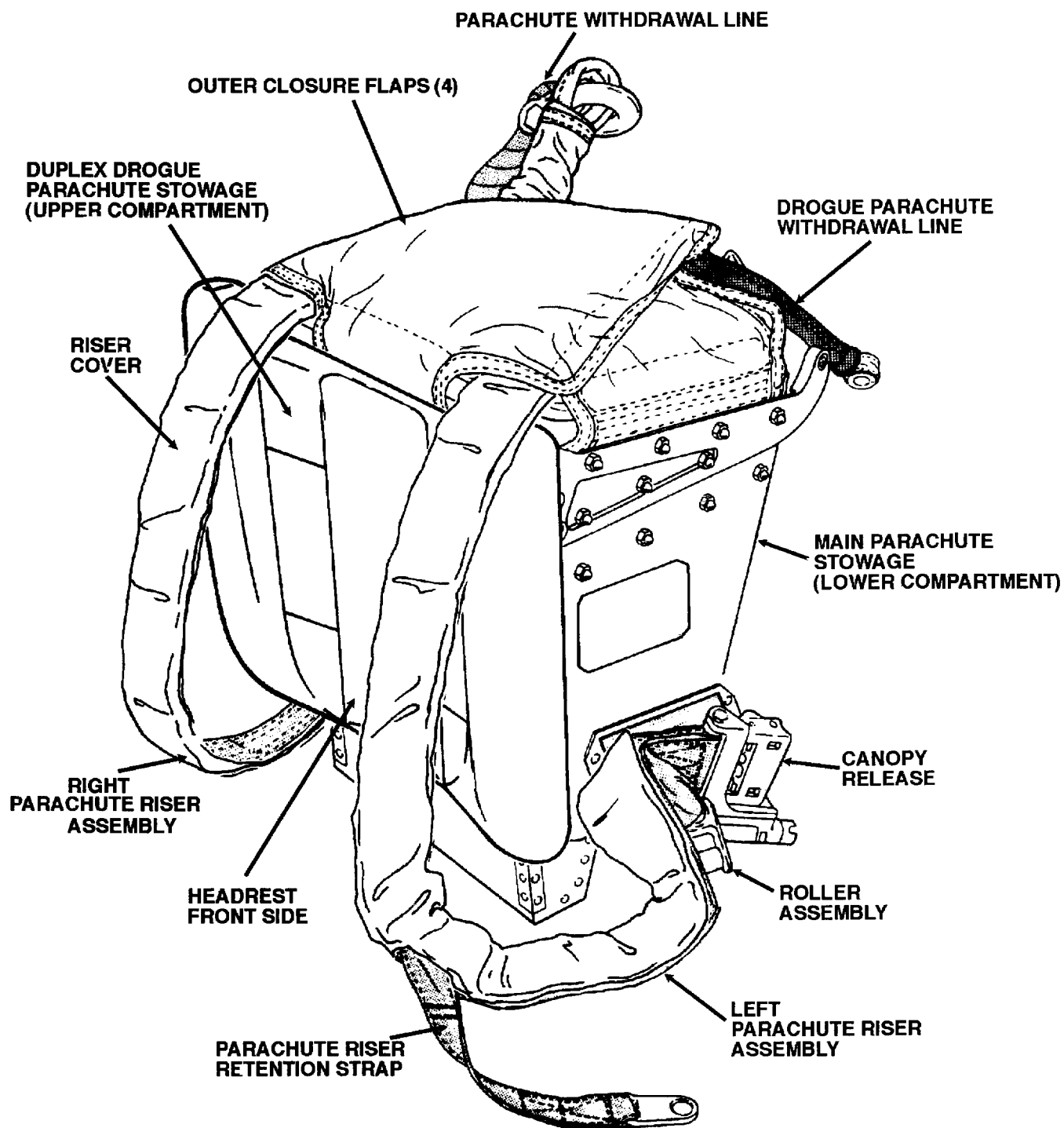
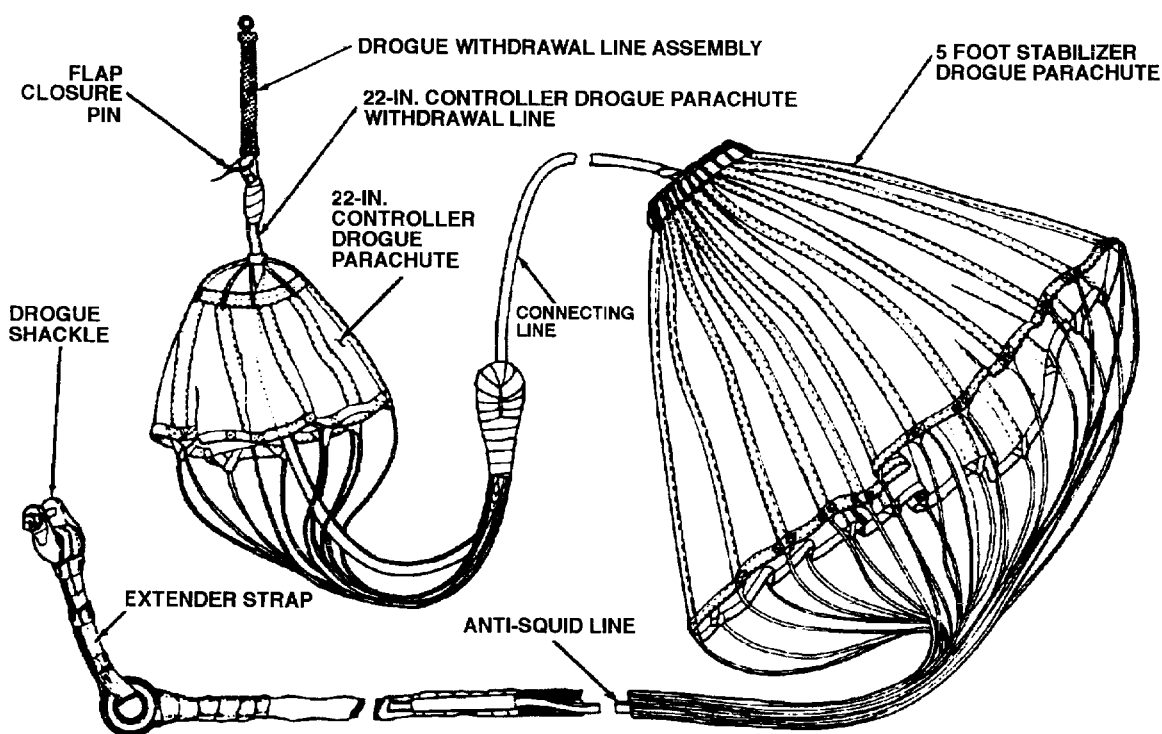
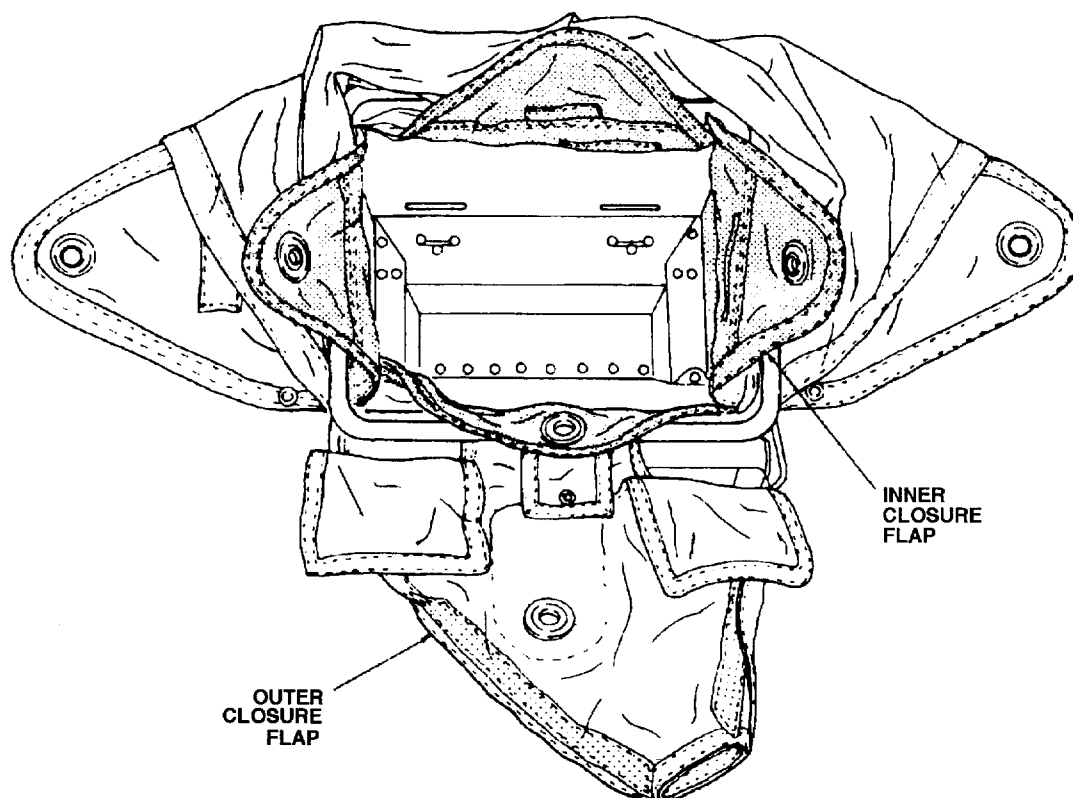


Figure 1. Personnel Parachute Assembly, A/P28S-24



22-in. and 5 Ft. Drogue Parachute Assemblies

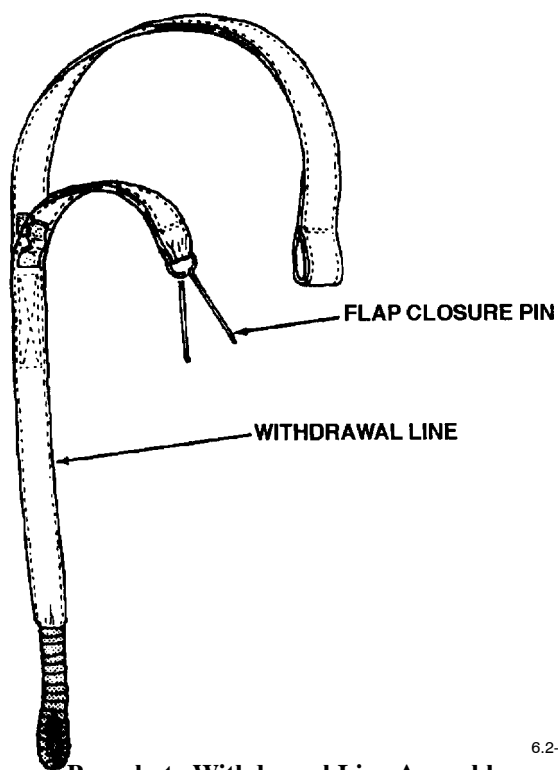
6.2-5359



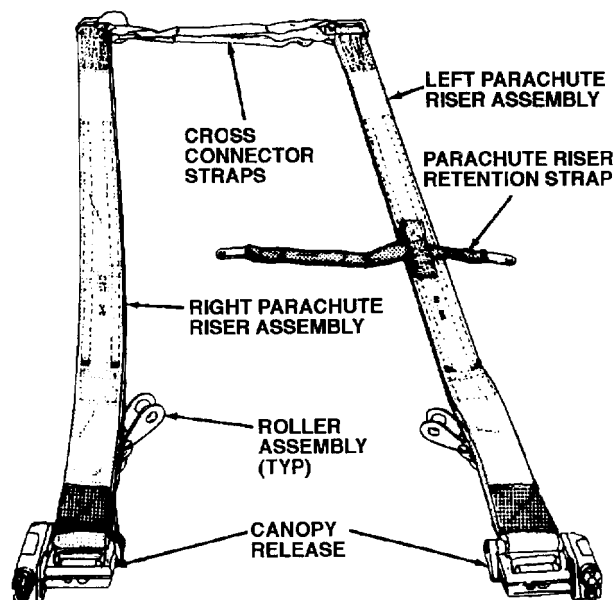
Personnel Parachute Container (OPEN)

Figure 2. Subassemblies, A/P28S-24 (Sheet 1 of 2)

6.2-5359B

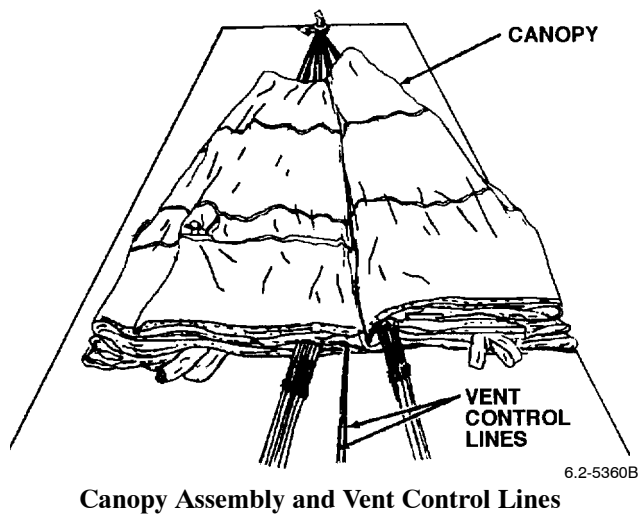


6.2-5360A

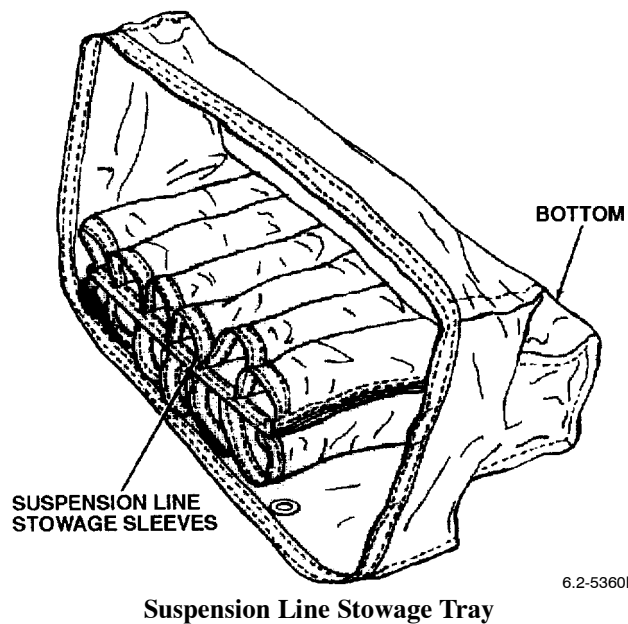


6.2-5360C

Riser Assembly and Cross Connector Straps



6.2-5360B



6.2-5360D

Figure 2. Subassemblies, A/P28S-24 (Sheet 2 of 2)

(2) The aircrew continues to free fall still restrained in the seat. The stabilizer drogue remains attached to the seat by a scissor shackle. As the preset altitude is reached (13,000 ± 1500 ft.), and after a 1.50 sec. time delay, the barostat allows the time release mechanism to operate which, in turn, opens the scissor shackle. At the same time, the harness restraints, lap-belt, leg restraints and survival kit disconnect.

(3) The drogue parachutes, now free from the seat, pull the parachute withdrawal line from the parachute container. As the withdrawal line reaches full stretch, the closure pin is removed from the closure pin loop, releasing the inner container flaps and exposing the canopy.

(4) The drogue parachute assembly, still attached to the withdrawal line which is attached to the canopy apex, extracts the canopy followed by the suspension lines.

(5) As load is applied, the risers and cross-connector straps are pulled from the container. The connector link ties break and the canopy fully opens, separating the aircrew from the seat.

(6) The aircrew descends suspended from the canopy release fittings on the PCU-33/P or PCU-56/P parachute restraint harness.

(7) During descent, the aircrew may maneuver the parachute by using two steering lines provided.

(8) Upon landing, the aircrew disengages the parachute assembly from the PCU-33/P or PCU-56/P parachute restraint harness by actuating the canopy release assembly.

(9) The parachute harness sensing release units provide an automatic backup method of releasing the risers after the aircrew makes a sea water entry.

7. AUTOMATIC OPERATION BELOW 13,000 FT. ALTITUDE.

a. When an aircrew ejects from the aircraft below the ejection seat predetermined aircrew/seat separation altitude, the following functions take place:

(1) The ejection seat drogue gun fires a piston deploying a 22-in. controller drogue. The controller drogue parachute, in turn, deploys a 5 ft. stabilizer drogue. The 5 ft. drogue parachute assembly decelerates and stabilizes the seat during descent.

(2) After a 1.50 sec. time delay, the time release mechanism operates which, in turn, opens the scissor shackle. At the same time, the harness restraints, lap-belt, leg restraints, and survival kit disconnect. At altitudes between 7,500 and 11,500 ft. the 1.50 sec. time delay is blocked by a g limiter which interrupts the timing sequence until deceleration force is less than 2.5 g's. At altitudes below 7,500 ft. the 1.50 sec. timer starts without interruption.

(3) The drogue parachutes, now free from the seat, pull the parachute withdrawal line from the parachute container. As the withdrawal line reaches full stretch, the closure pin is removed from the closure pin loop, releasing the inner container flaps and exposing the canopy.

(4) The drogue parachute assembly, still attached to the withdrawal line which is attached to the canopy apex, extracts the canopy followed by the suspension lines.

(5) As load is applied, the risers and cross-connector straps are pulled from container. Connector link ties break and the canopy fully opens, separating the aircrew from the seat.

(6) The aircrew descends suspended from the canopy release adapters on the PCU-33/P or PCU-56/P parachute restraint harness.

(7) During descent, the aircrew may maneuver the parachute by using the two steering lines provided.

(8) Upon landing, the aircrew disengages the parachute assembly from the PCU-33/P or PCU-56/P parachute restraint harness by actuating the canopy release fittings.

(9) The parachute harness sensing release units provide an automatic backup method of releasing the risers after the aircrew makes a sea water entry.

8. MANUAL OVERRIDE SYSTEM.

a. If, after ejection, the time release mechanism on the drogue gun fails, the operation of the manual override system will deploy the parachute. Operation of the manual override handle allows the following functions to take place:

(1) Pulling the manual override handle fires a manual override initiator. Gas pressure from the manual override cartridge passes to the drogue gun and fires a secondary cartridge and at the same time, operates the time release mechanism.

(2) The drogue gun fires a piston deploying a 22-in. controller drogue. The controller drogue parachute, in turn, deploys a 5 ft. stabilizer drogue. The 5 ft. drogue parachute assembly decelerates and stabilizes the seat during descent.

(3) Simultaneously with the firing of the drogue gun the time release mechanism releases the harness restraints, lapbelt, leg restraints and survival kit disconnect.

(4) The drogue parachutes, now free from the seat, pull the parachute withdrawal line from the parachute container. As the withdrawal line reaches full stretch, the closure pin is removed from the closure pin loop, releasing the inner container flaps and exposing the canopy.

(5) Drogue parachute assembly, still attached to the withdrawal line which is attached to the canopy apex, extracts the canopy followed by the suspension lines.

(6) As load is applied, the risers and cross-connector straps are pulled from the container. The connector

link ties break the canopy fully open, separating the aircrew from the seat.

(7) The aircrew descends suspended from the canopy release adapters on the PCU-33/P or PCU-56/P parachute restraint harness.

(8) During descent, the aircrew may maneuver the parachute by using the two steering lines provided.

(9) Upon landing, the aircrew disengages the parachute assembly from the PCU-33/P or PCU-56/P parachute restraint harness by actuating the canopy release assembly

(10) The parachute harness sensing release units provide an automatic backup method of releasing the risers after the aircrew makes a sea water entry.

9. MANUAL BAILOUT.

a. In the event of ejection seat failure there are no provisions for manual bailout.

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ORGANIZATIONAL MAINTENANCE**REPAIR PROCEDURES****A/P28S-24 PERSONNEL PARACHUTE ASSEMBLY****PART NO. MBEU 10030PA-4****List of Effective Work Package Pages**

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Reference Material

Intermediate and Depot Maintenance, Maintenance Procedures, Parachute Harness Sensing Release Units (PHSRU), MXU-746/P and MXU-747/P	WP 024 02
Introduction	WP 002 00

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Record of Applicable Technical Directives

None

1. INTRODUCTION.

2. This work package (WP) contains instructions for organizational level repair to ensure that the parachute assembly remains in ready-for-issue (RFI) status.

3. When performing repairs detailed in this WP, follow these guidelines:

a. Review all applicable instructions prior to starting repair.

b. Ensure that all necessary support equipment and materials required are available prior to starting repair.

c. When required, remove enough material from its source for immediate use only. Ensure that the material identification ticket remains with the source material at all times. Material that cannot be identified will not be used.

d. To ensure conformity, all repair work shall be carefully inspected and compared to applicable instructions at completion of work.

e. A quality assurance (QA) inspector shall examine the finished work.

4. PARACHUTE HARNESS SENSING RELEASE UNIT (PHSRU).

5. PHSRU TORQUE SEAL REPLACEMENT.

Materials Required

Specification or Part Number	Nomenclature
---------------------------------	--------------

F-900 Torque Seal (Color Optional)	Sealing Compound
------------------------------------	------------------

a. Torque loose screws to a value of 11 to 13 in-lbs.

b. Apply torque seal to the plug assembly, sensor plug and electronics package assembly attaching screws (Figure 1).

5A. PHSRU BATTERY AND SENSOR PLUG REPLACEMENT.

Support Equipment Required

Specification or Part Number	Nomenclature
---------------------------------	--------------

FLUKE-77	Multimeter
----------	------------

SA852AS112

Torque Driver

SA852AS113

Torque Tool, Sensor Plug

GGG-W-641

Socket Handle, 1/4-in. Drive

3405AS101-2

Socket, Special 7/16 x 1/4-in. Drive

a. Perform PHSRU Organizational Level Maintenance in accordance with WP 024 02 for the following tasks:

(1) Removal of battery.

(2) Installation of battery.

(a) Conduct the following:

1) Battery voltage check.

2) Battery polarity check.

3) Battery installation.

4) Final check.

(3) Removal of sensor plug.

(4) Installation of sensor plug.

(a) Conduct the following:

1) Sensor plug resistance check.

2) Final check.

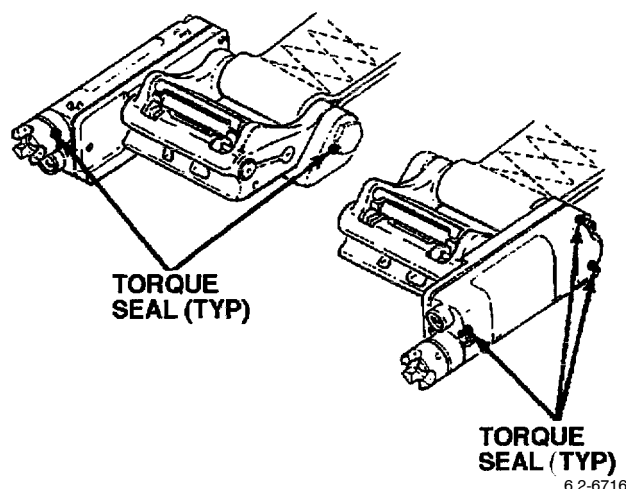


Figure 1. Replacement of Torque Seal on PHSRU

6.2-6716

6. CONTAINER ASSEMBLY.

7. CORNER TACKINGS REPLACEMENT.

Materials Required

Specification or
Part Number

Nomenclature

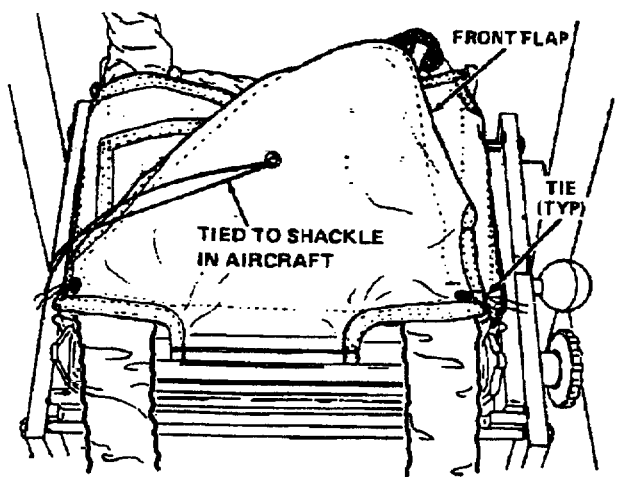
V-T-295

Thread, Nylon,
Size FF, Type I or II,
Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

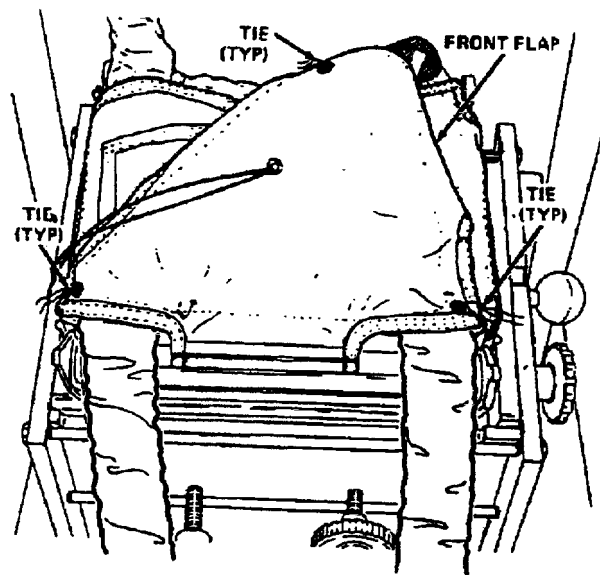
- Remove broken or loose tackings.
- Pass a length of size FF thread, single and waxed, thru grommets on front and corner flaps; tie off (Figure 2).



6.2-6124A

Figure 2. Pass Thread thru Grommets on Front and Corner Flaps

c. (Parachute assembly with outer front flap P/N MBEU 69955). Tie down corners of front flap and center aft end of flap with size FF thread, single and waxed. Pass thread thru grommets on flaps and then thru loop on lower flap; tie off (Figure 3).



6.2-6124B

Figure 3. Tie Down Front and Center Aft Flaps

8. RISER ASSEMBLY.

9. STEERING LINE LANYARD PULL LOOP TACKINGS REPLACEMENT.

Materials Required

Specification or
Part Number

Nomenclature

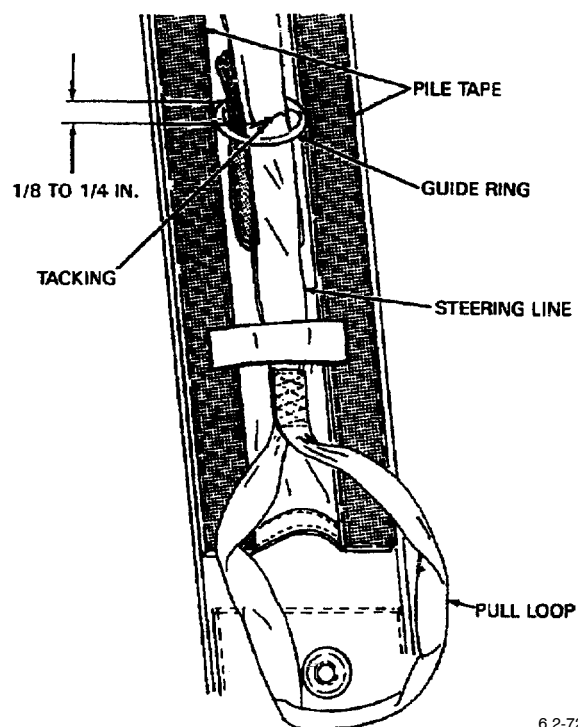
V-T-295

Thread, Nylon,
Size A, Type I or II,
Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

- Fully extend pull loop and position between risers.
- Tack at centerline of riser, 1/8 to 1/4-in. below guide ring with one turn size A thread, single and waxed; tie off (Figure 4).



6.2-7229A

**Figure 4. Replacement of Steering Line Lanyard
Pull Loop Tackings**

c. DELETED.

INTERMEDIATE AND DEPOT MAINTENANCE

PACKING PROCEDURES

A/P28S-24 PERSONNEL PARACHUTE ASSEMBLY

PART NO. MBEU10030PA-4

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Reference Material

Cartridge Actuated Devices (CADS) and Propellant Actuated Device (PADS) (IETM)	NAVAIR 11-100-1.1
Introduction, Organizational, Intermediate and Depot Maintenance with Illustrated Parts Breakdowns,	
Emergency Personnel and Drogue Parachute Systems	WP 002 00
Organizational and Intermediate Maintenance with Illustrated Parts Breakdown,	
Miscellaneous Peculiar Support Equipment	AG-000AC-GSE-000
Organizational, Intermediate and Depot Maintenance, Illustrated Parts Breakdown,	
A/P28S-24 Personnel Parachute Assembly	WP 018 04
Organizational, Intermediate and Depot Maintenance, Parachute Loft Requirements/Administration	WP 003 00
Organizational, Intermediate and Depot Maintenance, Support Equipment	WP 005 00

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Record of Applicable Technical Directives

None

1. GENERAL.

a. This Work Package (WP) provides packing instructions for the A/P28S-24 Personnel Parachute Assembly.

b. Packing instructions are provided with the assumption that they will be carried out under ideal conditions in a parachute loft WP 003 00. When a parachute assembly must be packed under unfavorable conditions, provisions must be made to protect it from possible damage and excessive humidity.

c. In no case shall packing of a parachute assembly be interrupted after the packing operation has been started. If the packing operation is interrupted due to unforeseen circumstances, the parachute assembly shall be completely repacked per instructions contained in this WP.

d. Quality Assurance (QA) points have been included in the packing procedures. When a procedural step is followed by "(QA)" there is a quality assurance requirement. Witnessing of QA steps may be delayed by QA if their satisfactory completion is verified in later steps.

e. During packing procedures, packer shall be positioned on left side of packing table, and helper on right side when viewed from harness/riser end of table.

2. PRELIMINARY PROCEDURES.

Support Equipment Required

Part Number	Nomenclature
Refer to WP 005 00	Fid
TMA2	Hex Head Driver 1/16-in. Bit
MS33750	Hi-Torque Driver, Size HTS-2
Refer to WP 005 00	Long Bar
FLUKE 77	Multimeter
Refer to WP 005 00	Packing Hook
MBEU68049	Packing Press Block (Large)
MBEU68050	Packing Press Block (Small)

Part Number	Nomenclature
MBEU68750	Press Assembly, Parachute Packing
—	Screwdriver, Torque, 0-25 in. lb.
—	Shot Bag (3)
11-1-3512	Small Line Separator
MBEU68048	Stick, Drogue Parachute Packing
MBEU68051	Stowage Tray Locating Rod (2)
MBEU68042	Support Box Assembly Packing Press
MBEU68043	Support Box Packing Plate, (Front)
MBEU68044	Support Box Packing Plate, (Rear)
MBEU68045	Support Box Packing Plate, (Left)
MBEU68046	Support Box Packing Plate, (Right)
MBEU68047	Support Box Packing Plate, (Lower)
MBEU68053	Tensioner Locking Key
MBEU68052	Tool, Transfer, Suspension Line
TQS6	Driver, Torque, in-lbs.
—	Wrench, Socket, 1/4-in.
—	Wrench, Socket, 3/4-in.
—	Wrench, Torque, 3/8-in. Drive, 0-50 ft. lb.

Materials Required

Specification or Part Number	Nomenclature
PIA-C-5040	Cord, Nylon, Type I or IA

Specification or Part Number	Nomenclature
---------------------------------	--------------

00311 Dry Film Vydax Sprayon Products (Open Purchase)	Release Agent
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MIL-R-1832	Rubberband, Retaining Type I
------------	---------------------------------

F-900 Torque Seal (Color Optional)	Sealing Compound
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V-T-295	Thread, Nylon, Size A, Type I or II, Class A
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V-T-295	Thread, Nylon, Size E, Type I or II, Class A
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V-T-295	Thread, Nylon, Size FF, Type I or II, Class A
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V-T-295	Thread, Nylon, Size 3, Type I or II, Class A
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V-T-295	Thread, Nylon, Size 6, Type I or II, Class A
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a. Ensure that all support equipment and materials required are available prior to starting.

b. Inspect packing tools for nicks, burrs, or sharp edges which may cause damage to parachute assembly.

c. Count and record number of packing tools.

d. Clean packing table.

3. INSPECTION OF PARACHUTE PACKING PRESS (MBEU68750).

a. Inspect Parachute Packing Press in accordance with AG-000AC-GSE-000, WP 033 00, Intermediate Maintenance with Illustrated Parts Breakdown, Parachute Packing Press, P/N MBEU68750.

4. LAYOUT OF RIGGED PARACHUTE ASSEMBLY.

a. Position parachute container on packing table front side up.

b. Remove four screws which secure headrest cushion from front side of container. Remove headrest.

c. Remove two suspension line stowage tray nuts and washers from bottom of container.

d. Cut ties on outer flaps. Open flaps and remove drogue protective flap.

e. Remove both the controller and stabilizer drogue parachutes from container. Do not disassemble drogue shackle from parachute withdrawal line.

f. Lift drogue protective flap covering connecting line and eye end of controller drogue.

g. Remove protective flap.

h. Cut ties on inner flaps. Cut the Type I or IA nylon cord on parachute withdrawal line. Remove closure pin from closure loop and inner front flap.

i. Remove canopy from container until suspension lines start to pull from suspension line stowage tray.

j. Remove suspension line stowage tray from container and set container aside.

k. Pull suspension lines from suspension line stowage tray.

l. Pull apex out prior to inspection.

NOTE

Do not cut connector link ties.

m. Cut four suspension line stowage tray tackings, remove suspension line stowage tray, and set aside.

n. Connect connector links to table and crown bridle loop to tension strap. Tension canopy.

o. Ensure that suspension line connector links are tied in pairs with a single turn of waxed size FF thread at two lower corners of each pair of connector links. (QA)

NOTE

If suspension line connector link ties are broken, proceed with steps (1) thru (4).

(1) Place connector link holding suspension lines numbered 6 thru 10 on top of connector link holding suspension lines numbered 1 thru 5.

(2) Place connector link with suspension lines numbered 11 thru 15 on top of connector link with suspension lines numbered 16 thru 20.

(3) Ensure that steering lines are centered on risers between the connector links.

(4) Tie connector links in pairs with one turn of size FF thread, single and waxed, at two lower corners of each pair of connector links; tie off. (QA)

p. Fold back canopy gores numbered 10 and 11 to expose apex bridle loop and faked vent control lines restraining line.

q. Cut thread which secures vent control lines loop to apex bridle loop and release faked lines, which are secured by the rubber band. Remove rubber band and discard. (QA)

r. Reach down inside canopy from the top and pull out apex bridle loop.

s. Attach apex bridle loop to tension hook and apply tension. Lay crown bridle beside apex bridle.

t. Remove and scrap used riser covers.

5. INSPECTION (SPECIAL).

a. Maximum scheduled repack cycle is 448 days.

6. SERVICE LIFE CHECK AND CONFIGURATION UPDATING.

NOTE

Unless otherwise noted, parachute component life shall start on the month of the date of manufacture and expire on the last day of that month.

a. All internal service life components, including cartridges, shall be replaced if service life expires prior to the next repack cycle. Repack cycles may be shortened to correspond to the first component that is expiring prior to the next inspection cycle. An external overage component (i.e. Parachute Harness Sensing Release Unit Cartridge) can be replaced without a parachute repack.

NOTE

Upon initiation of any Quality Deficiency Report (QDR), contact the In-Service Support Team at NAWCWD, China Lake, CA.

b. When replacing an external overage component without a parachute repack, draw a single red line through any information pertaining to that component on the Parachute Record (OPNAV 4790/101). The replacement component will be annotated on the next available line. The QA who witnessed the task shall apply the QA stamp to the right of the entry and complete the VIDS/MAF (OPNAV 4790/60).

c. A parachute assembly may be opened to permit compliance with a Technical Directive. After completion of directive, the parachute assembly repack cycle may be re-based if all parachute components have the necessary life available or may be returned with the original repack date in order to keep it aligned with the actual aircraft inspection cycle.

d. When a component reaches the service/total life limit, it shall be returned to supply for disposition.

e. If parts received from supply are lacking a date of manufacture and are new in manufacturer's packaging, they may be used for one complete repack cycle, then removed. Place "No Date of Manufacture" in the Date of Manufacture's block on the Parachute Record (OPNAV 4790/101). Submission of a Quality Deficiency Report (QDR) shall follow each occurrence.

f. Components without a service/total life shall be removed from service if the components do not pass inspection, as determined by Quality Assurance Representative (QAR) or Collateral Duty Inspector (CDI).

g. Check date placed in-service and date of manufacture on each parachute part for service/total life as follows:

Nomenclature	Service Life (Yr)	Total Life (Yr)
Battery	4	4
Canopy Assembly	None	15
Cartridge MW19	Refer to NAVAIR 11-100-1.1	
Connecting Line	None	10
Controller Drogue	None	10
Controller Drogue Withdrawal Line	None	15
Cross-Connector Strap	(See Note 1)	(See Note 1)
Drogue Extender Strap	None	13
Electronics Package Assembly	None	8
Lower Steering Line	(See Note 2)	(See Note 2)
Parachute Withdrawal Line	None	10
Riser Assembly	None	13
Stabilizer Drogue	None	10

Note 1: Replace at Riser Assembly replacement.

Note 2: Replace at Canopy Assembly replacement.

(1) Markings for completeness, legibility, and agreement with information on Parachute Record (OPNAV 4790/101).

(2) Compare configuration of parachute assembly to that shown in WP 018 04 Illustrated Parts Breakdown.

7. SUSPENSION LINE CONTINUITY CHECK.

a. Grasp line 11 on left side of gore 10 and raise suspension line to height sufficient to ensure that suspension line is free of dips and twists from skirt hem to connector link, continue procedure with suspension lines 12 thru 20. (QA)

b. Use same procedure as in step a, above on right side of gore 10, except start with suspension line 10 and work thru suspension line 1. (QA)

c. Ensure that vent control line are connected at in-board end of connector links adjacent with suspension lines 1 and 20. (QA)

d. Steering lines attached to suspension lines 4 and 17 (Figure 1). (QA)

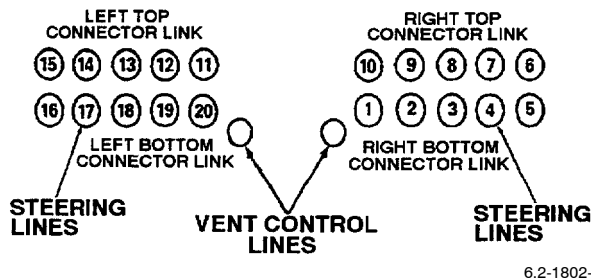


Figure 1. Suspension Line Continuity Check

8. CANOPY ASSEMBLY.

a. Canopy skirt hem, fabric surface, radial seams, vent hem, cross seams, water deflation pockets, pocket retaining tapes, netted panels, for cuts hole, ruptures, contamination, deterioration, and loose or broken stitching.

b. Suspension lines for fraying, contamination, burns, presence of twists, snags, and loops.

c. Attachment and condition of steering lines at suspension lines 4 and 17, insertion of steering line into casing, and whipstitching.



Ensure that vent control lines do not run under or around suspension lines. Ensure that vent control lines are attached at inner ends of bottom connector links.

d. Vent control lines for twists, fraying, snags, loops and security of attachment at the connector links. (QA)

e. Vent control restraining line for twists, fraying, snags, and loops.

f. Connector links for corrosion, distortion, bends, dents, nicks, burrs, sharp edges, breaks, broken rivet, and defective tensioner.

g. Tensioner for correct installation. There shall be no play in tensioner when rivet is installed. Ensure that the red lines on the connector link and tensioner are aligned (Figure 2). (QA)

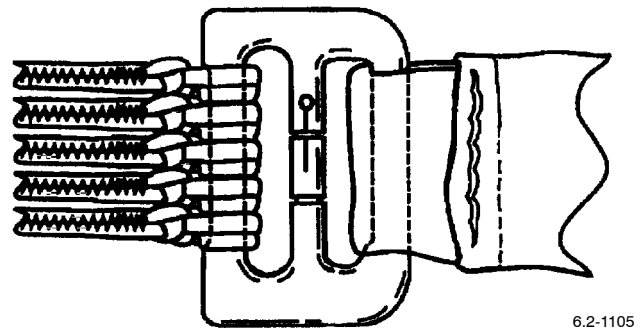


Figure 2. Alignment of Tensioner

9. CROWN AND APEX BRIDLE LINES.

a. Grasp one group (10 legs) of crown bridle lines at main seam loops and move toward crown bridle loop, allowing lines to run freely over palm of hand. Visually examine lines for fraying, friction burns, and presence of twists, snags, and loops.

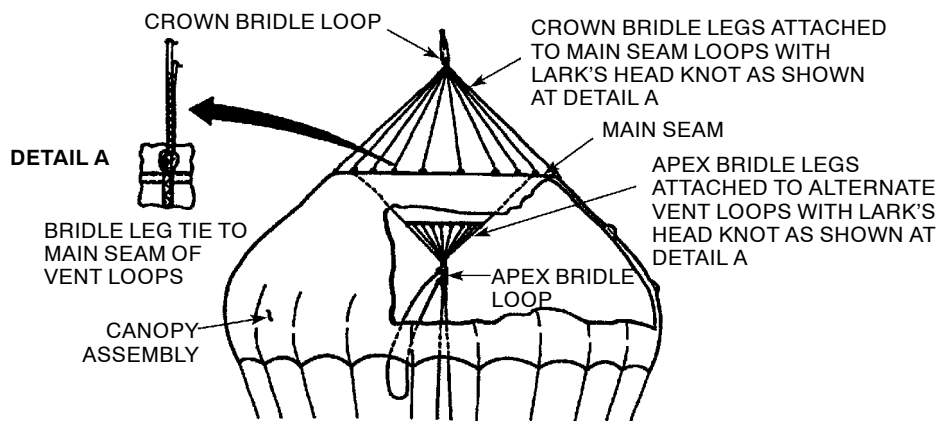
b. Grasp one apex bridle line attached at vent loop, allowing line to run freely over palm of hand. Visually examine lines for frays, friction burns, and presence of snap and loops.

c. Grasp remaining groups of lines and inspect in same manner as steps a and b.

d. Security of attachment of crown bridle legs to main seam loops. Lines shall be securely attached to each loop with a Lark's head knot.

e. Crown and apex bridle whipped threads for frays and breaks.

f. Correct attachment of apex bridle legs to vent loops. Lines shall be securely attached to alternate vent loops with a Lark's head knot (Figure 3).



6.2-1106

Figure 3. Correct Attachment of Apex Bridle Legs

10. WITHDRAWAL LINE.

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

- Webbing for contamination, cuts, fraying, deterioration, loose or broken stitching.
- Security of attachment at extender strap.
- Flap closure pin for security of attachment, corrosion, burrs, and distortion.
- Shackle sleeve for contamination, deterioration, security of stitching, and correct attachment.
- Slide shackle sleeve off and check main canopy shackle for security of attachment, corrosion, burrs, and distortion (Figure 4).

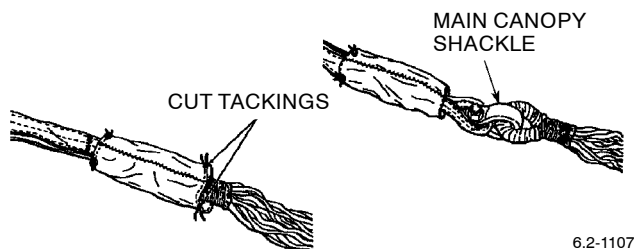
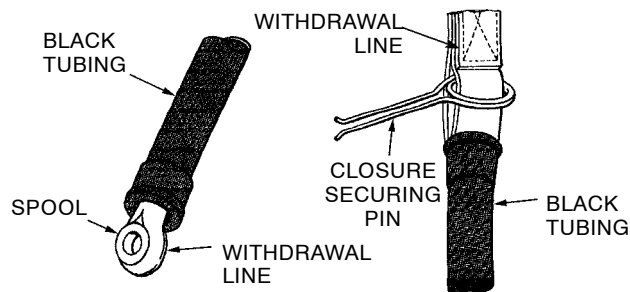


Figure 4. Main Canopy Shackle for Security of Attachment

- Slide shackle sleeve back into position over shackle and tack open end of sleeve in two (2) places with one turn of size E thread, single and waxed; tie off.

11. CONTROLLER DROGUE.

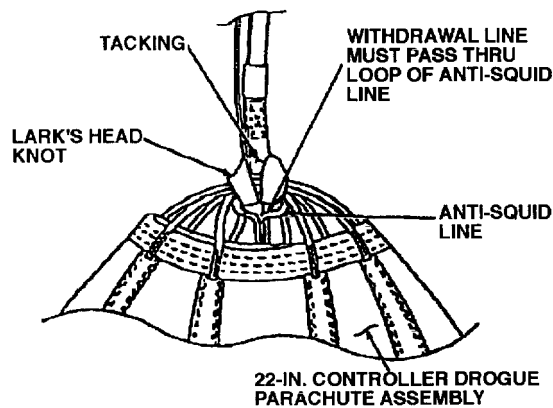
- Withdrawal line spool for nicks, burrs, contamination, corrosion, and proper attachment of drogue gun spool to withdrawal line. (QA)
- Black tubing for cuts, nicks, and presence of dirt.
- Closure securing pin for nicks, burrs, corrosion, bends, and correct attachment to withdrawal line (Figure 5).



6.2-1108

Figure 5. Closure Securing Pin

- Withdrawal line for contamination, cuts, fraying, loose or broken stitching, and security of attachment and tacking.
- Fabric surface, seams, and suspension lines at canopy apex for contamination, mildew, cuts, tears, fraying, and loose or missing stitches.
- Suspension lines from skirt hem to terminal eye, for frays, contamination, presence of twists, security of attachment at skirt hem, condition of V-tabs; security and condition of wrapping at terminal eye.
- Ensure that all apex suspension lines and anti-squid lines are encircled by withdrawal line with a Lark's head knot and tacking is properly attached and secure (Figure 6). (QA)

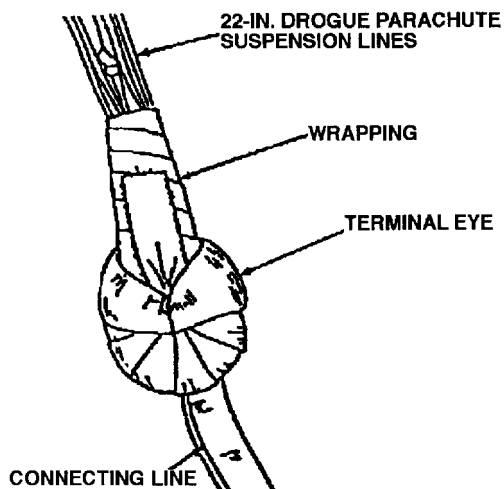


6.2-1109

Figure 6. Ensure Apex Suspension Lines and Anti-Squid Lines are Encircled

h. Anti-squid line at canopy apex and terminal eye for contamination, cuts, fraying, loose or broken stitching, and security of attachment. (QA)

i. Connecting line for contamination, cuts, fraying, loose or broken stitching, and security of attachment to controller drogue terminal eye (Figure 7).



6.2-1110

Figure 7. Connecting Line for Security of Attachment

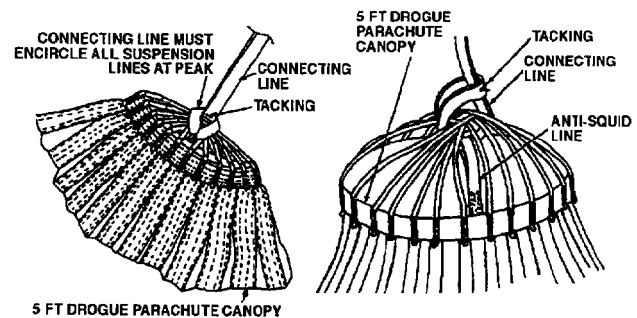
12. STABILIZER DROGUE.

a. Fabric surface, seams, and suspension lines for contamination, cuts, tears, fraying, and loose or missing stitches.

b. Suspension lines and anti-squid line from skirt hem to confluence point for frays, presence of twists in indi-

vidual lines, snags, and loops; attachment of suspension lines, V-tabs and security and condition of wrapping at confluence point.

c. Ensure that all apex suspension lines and anti-squid lines are encircled by a Lark's head knot formed by a connecting line and tacking is properly attached and secure (Figure 8).



6.2-1111

Figure 8. Connecting Line and Tacking Secure

d. Braided tubular cover for frays, ruptures, contamination, and condition of wrappings.

e. Extender strap for contamination, cuts, fraying, and loose or broken stitching.

f. Security of electrical tape (3 places).

g. Drogue shackle for nicks, burrs, and corrosion.

h. Attachment bolt and nut for nicks, burrs, corrosion, and stripped or scored threads.

13. RISER ASSEMBLY.

a. Webbing for contamination, rust at points of contact with metal parts, cuts, twists, fading, wear, fraying, abrasions, loose or broken stitching and broken tackings.

b. Steering lines for wear, broken stitches, and correct attachment to the upper steering line.

c. Hook and pile tape on left and right riser assemblies for serviceable condition and security of attachment.

d. Steering line riser tackings for security of attachment.

e. Pressure sensitive tape for condition.

f. Roller fitting assembly for corrosion, damage and security of attachment.

g. Steering line handle secured around snap assembly.

h. Parachute riser retention strap for wear, broken stitches and correct attachment to left riser.

i. Retention strap lug assembly for corrosion, distortion, sharp edges, and security of attachment.

j. Cross-connector straps for contamination, cuts, fraying, and loose or broken stitching.

k. Proper attachment of cross-connector straps to connector links.

14. CONTAINER AND STOWAGE TRAY.

a. Interior of headbox for foreign objects, corrosion, and structural integrity. Security of attachment of pressure sensitive tape, over internal strip assembly.

b. Inner and outer closure flaps for wear, loose or missing eyelets, grommets, damaged hook and pile fastener tape, frayed or broken stitching, contamination. Ensure that all closure flaps are securely attached to container.

c. Wire and webbing loops on inner and outer flaps for damage and security of attachment.

d. Inner and outer protective flaps for wear, fraying or broken stitching, and contamination.

e. Mechanical lock housing for dents, wear, contamination, security of attachment.

f. Bottom mounting brackets for dents, wear, contamination, and security of attachment.

g. Container headpad for cracks, cuts, wear, contamination; hook and pile fastener tape for presence and security of attachment.

h. Container metal base for cracks, chips, and deterioration.

i. Stowage tray assembly for wear, frayed or broken stitching, contamination, security of attachment of stowage sleeves to stowage tray, locating studs, mounting plate assembly, and grommets for damage and retention.

j. Drogue protector flap for wear, fraying, broken stitches and contamination; hook and pile fastener tape for presence and security of attachment.

k. Protection flap for wear, fraying, broken stitches and security of attachment.

l. Decals and labels for presence and security of attachment.

m. Riser stowage hook and pile fastener tape for presence and security of attachment.

15. PACKING.

16. WHIPPING AND FOLDING CANOPY.

NOTE

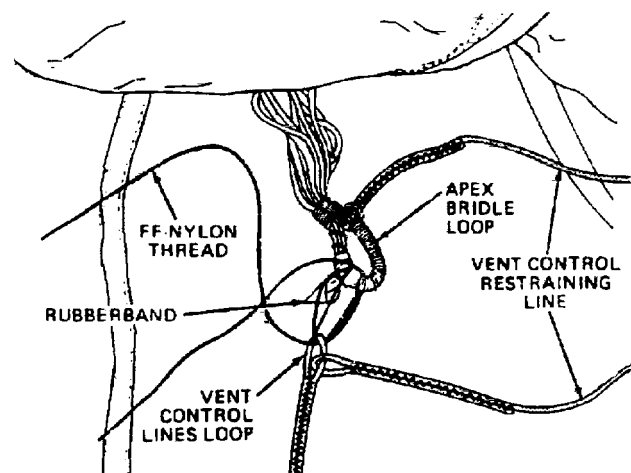
Tie off all tacking with a surgeon's topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Packer shall hold crown bridle loop while helper pulls apex down into canopy using vent control lines.

b. Packer and helper shall lift gore number 11 at skirt hem and draw it up to the center of the canopy exposing apex bridle loop.

c. Attach new rubber band to apex bridle loop with a Lark's head knot.

d. Secure vent control lines loop to apex bridle loop with three turns of size FF thread, single and waxed; tie off (Figure 9). (QA)



6.2-5555A

Figure 9. Secure Vent Control Lines

e. Fake vent control restraining line into 5-in. bights and secure with a doubled rubber band which is attached to apex bridle loop (Figure 10).

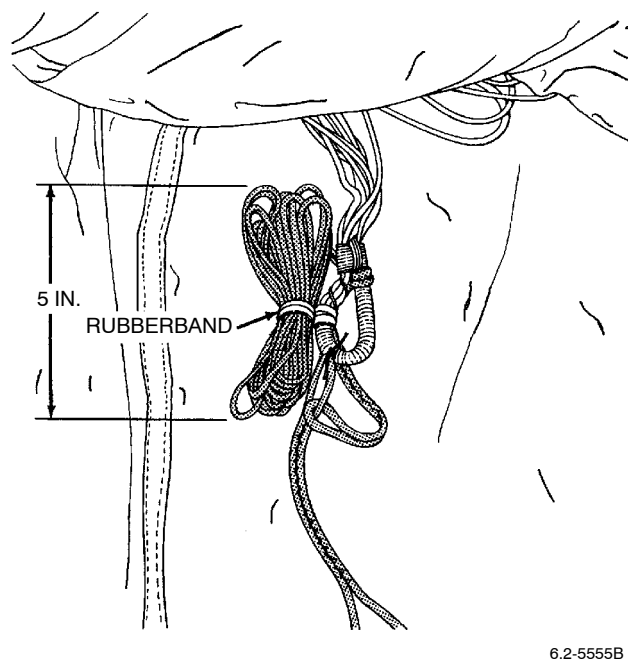


Figure 10. Fake Vent Control Restaining Line

f. Apply tension to canopy.

g. Packer and helper shall lift suspension lines numbered 11 and 10 up and outward. Skirt hem between lines shall be taut so that canopy apex can be seen from inside. While holding suspension lines up, packer and helper shall whip gore hanging from line outward (Figure 11).

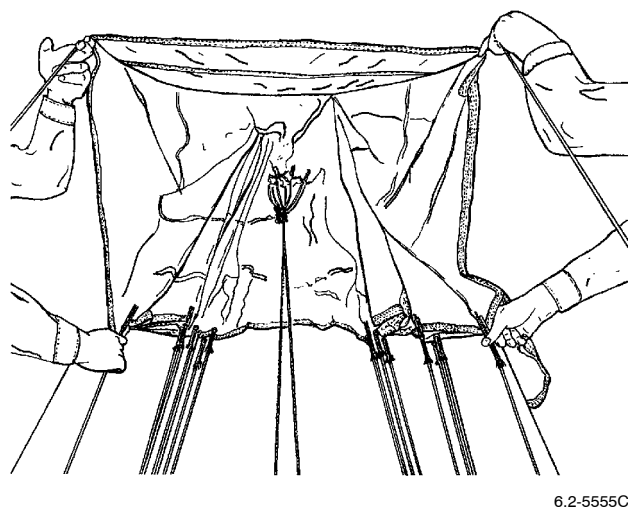


Figure 11. Packer and Helper Lift Suspension Lines Numbered 11 and 10

h. Raise next suspension line upward toward line previously held in hand. Use a rapid circular motion (Figure 12).

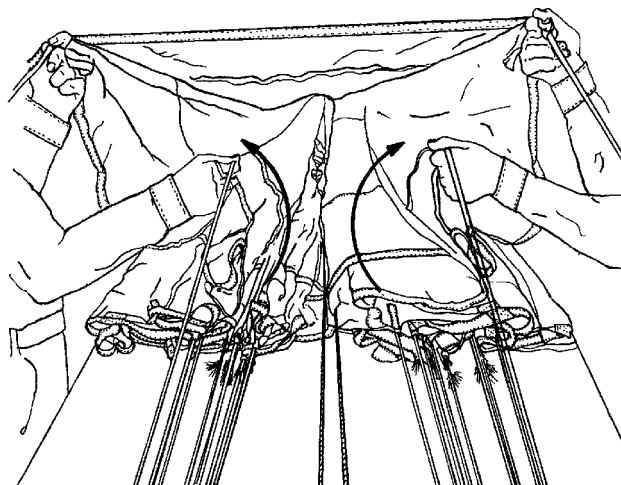


Figure 12. Raise Next Suspension Line Upward

i. Continue whipping operation for all gores. Move whipped gores rapidly back and forth across table. Ensure that radial seams are not overlapped by gore material (Figure 13).

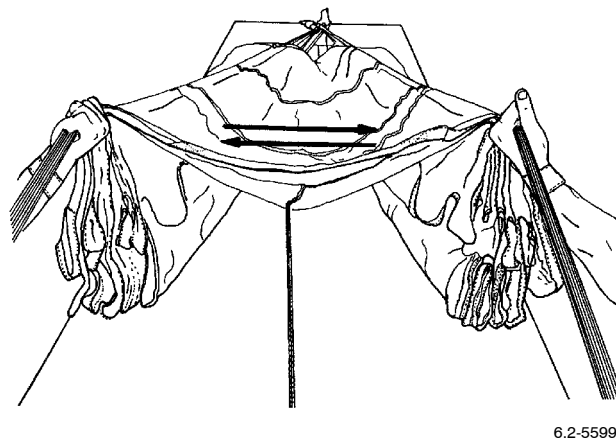


Figure 13. Continue Whipping and Folding

j. Stretch the two groups of suspension lines to edges of packing table with gores hanging over sides. Packer and helper, while holding suspension line groups at edges of packing table, shall simultaneously flap hanging gores rapidly up and down, in a whipping motion, to end wrinkles (Figure 14).

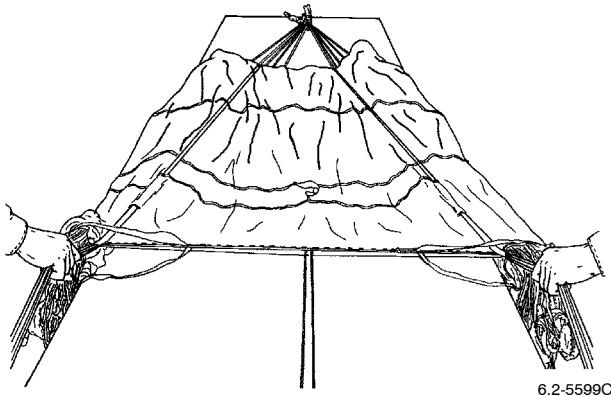


Figure 14. Stretch The Two Groups

k. Packer shall flap top gore up and down at skirt hem center while helper holds bottom gore at skirt hem center (Figure 15).

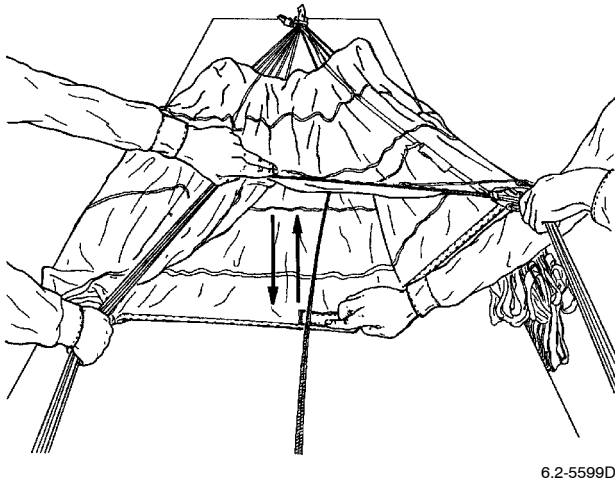


Figure 15. Packer Shall Flap Top Gore

l. On signal, packer and helper shall pull their respective gores at skirt hem centers toward table edges and at the same time, bring suspension line groups to center of packing table (Figure 16).

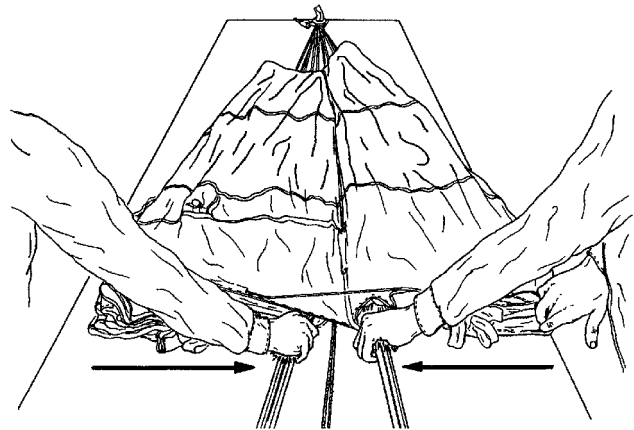


Figure 16. On Signal Packer and Helper Shall Pull Their Respective Gores to Center of Table

m. Place vent control lines under line separator. Packer and helper shall insert suspension line groups into their respective slots in line separator. Packer and helper shall place shot bag across lines. Packer shall place another shot bag across skirt hem on packer's side of suspension lines.

n. Helper shall rotate all gores as a group, except bottom gore, from helper's side to packer's side of table (Figure 17).

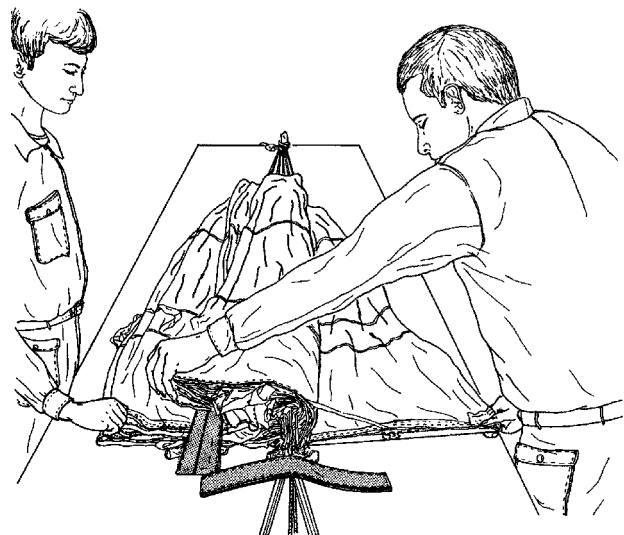
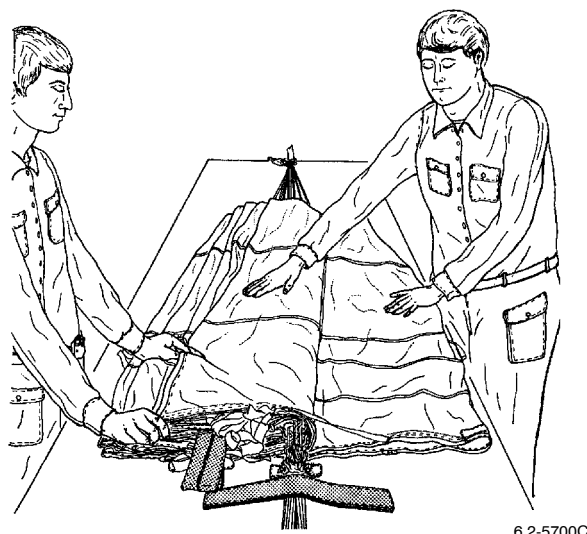


Figure 17. Helper Shall Rotate All Gores to Packer's Side

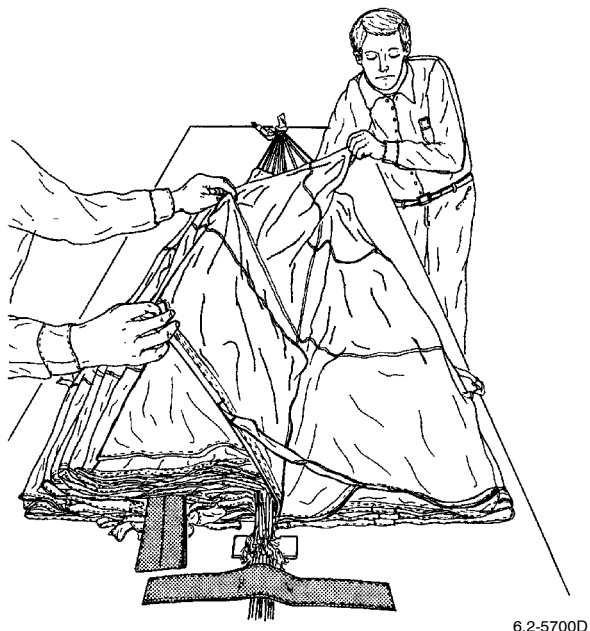
o. Helper shall straighten and smooth bottom gore on helper's side throughout its length from skirt to crown (Figure 18).



6.2-5700C

Figure 18. Helper Shall Straighten And Smooth Gores

p. Packer shall return and smooth folded gores on top of shot bag, one at a time, to helper's side of packing table. Helper shall reach down inside canopy from crown and smooth each gore to apex (Figure 19).

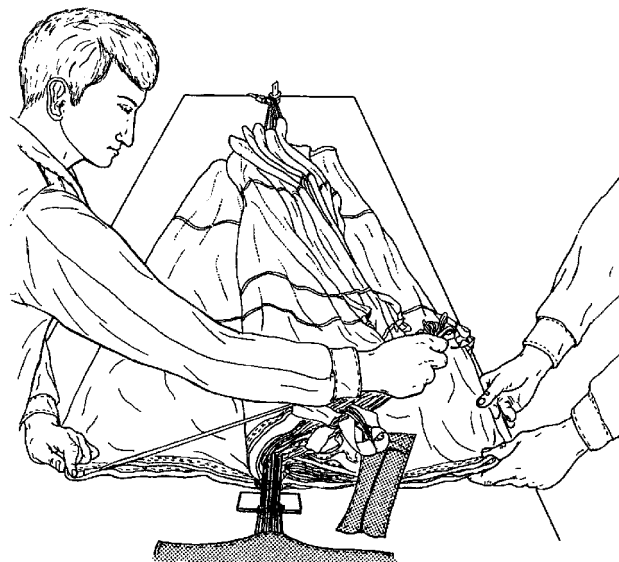


6.2-5700D

Figure 19. Packer Shall Return and Smooth Gores

q. Place shot bag across skirt hem on helper's side of packing table.

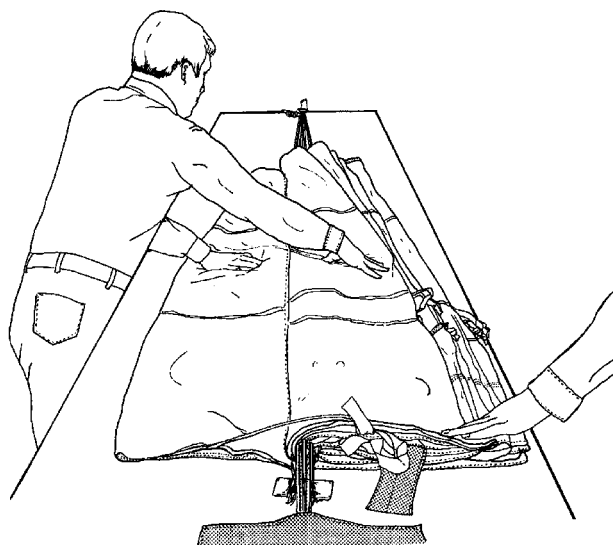
r. Packer shall rotate all folded gores as a group, except bottom gore, from packer's side to helper's side of packing table (Figure 20).



6.2-5701A

Figure 20. Packer Shall Rotate Folded Gores To Helper's Side

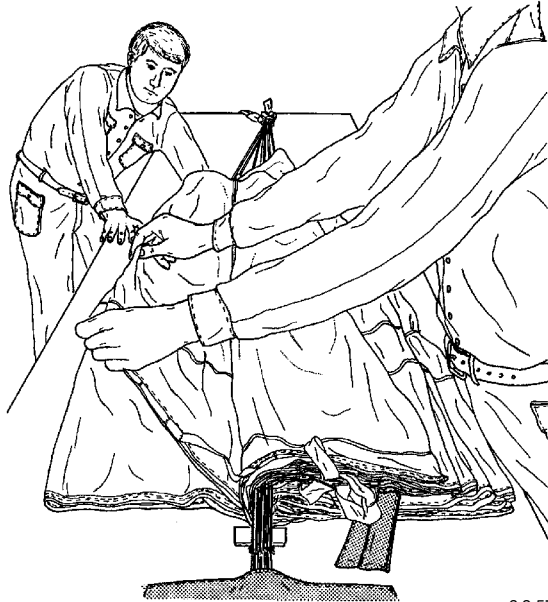
s. Packer shall straighten and smooth bottom gore on packer's side throughout its length from skirt to crown (Figure 21).



6.2-5701B

Figure 21. Packer Shall Straighten and Smooth Gores on Packer's Side

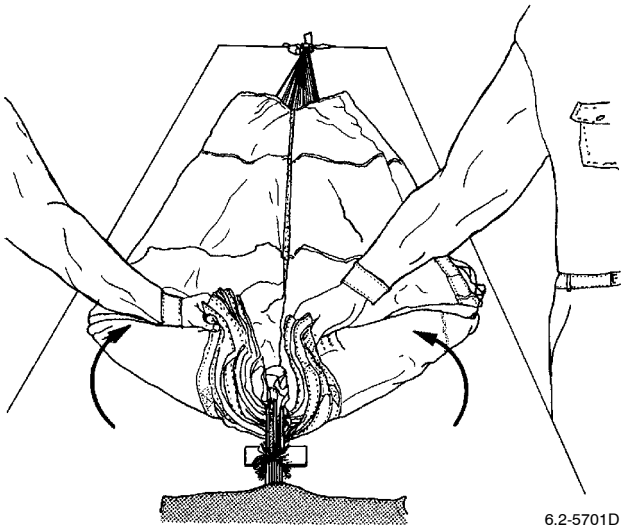
t. Helper shall return and smooth folded gores on top of shot bag, one at a time, to packer's side of packing table. Packer shall reach down inside canopy from crown and smooth each gore to apex (Figure 22).



6.2-5701C

Figure 22. Helper Shall Return and Smooth Gores to Packer's Side

u. Remove shot bag from gores. Packer and helper shall grasp skirt hem at gore midsections and rotate toward suspension lines (Figure 23).

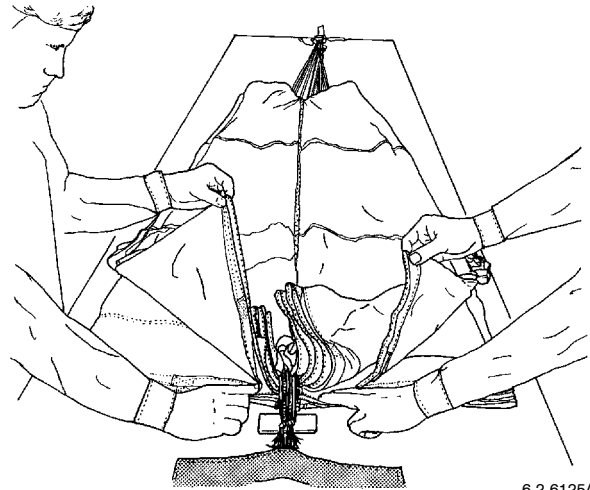


6.2-5701D

Figure 23. Remove Shot Bag

v. Packer and helper shall align and count each fold when placing folds back on table. Skirt shall be made

neat by having pocket bands aligned in same direction inward on top of each other. Each group of folds shall contain 10 gores (Figure 24).

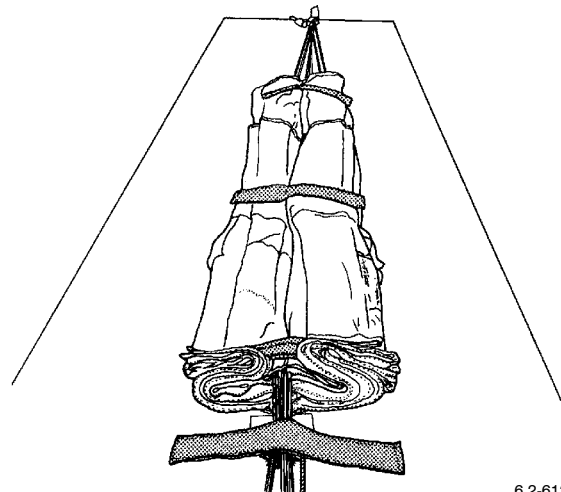


6.2-6125A

Figure 24. Packer and Helper Shall Align and Count Each Fold

w. Packer and helper shall smooth gores from crown to skirt hem.

x. Packer and helper shall grasp skirt hem and folded gores and S-fold gores toward center. Butt S-folds together. Place shot bags at skirt hem, center and top of S-folded parachute (Figure 25).



6.2-6125B

Figure 25. Packer and Helper Shall Grasp Hem and Folded Gores

y. Remove small line separator.

17. STOWAGE OF SUSPENSION LINES AND VENT CONTROL LINES.

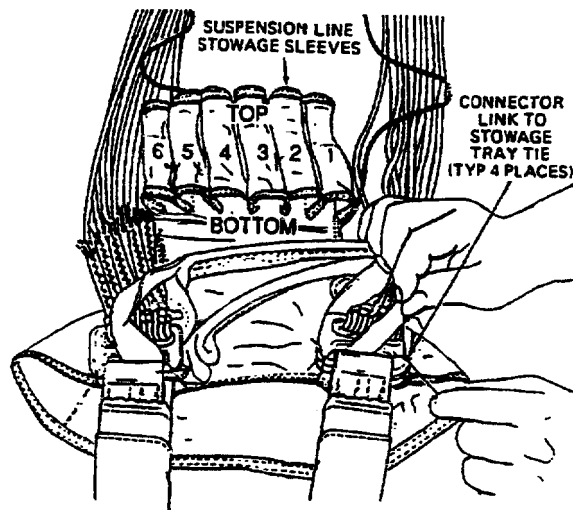
NOTE

Tie off all tackings with a surgeon's topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Release tension from canopy and remove crown bridle from tension hook. Remove tension hooks from connector links. Install new riser covers.

b. Position stowage tray under cross-connector straps and between risers with tray cover grommets and stowage sleeves 1 thru 6 up. Ensure that stowage sleeve top is facing toward canopy.

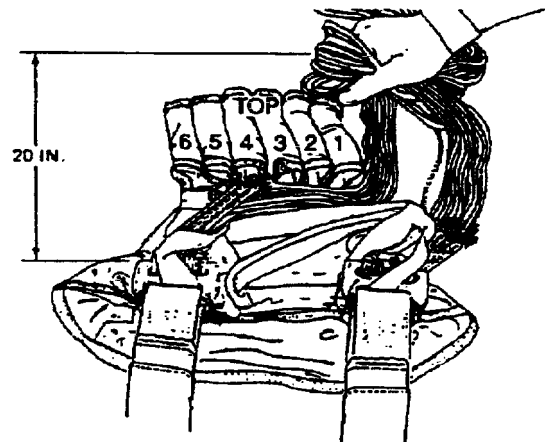
c. Attach both sets of connector links to suspension line stowage tray. Pass a length of size FF thread, single thru stowage tray grommet and thru lower section of each connector link; tie off (Figure 26). (QA)



6.2-5703A

Figure 26. Attach Both Sets of Connector Links

d. Form a bight in suspension lines about 20-in. from top of connector links. Route suspension and vent control lines around helper's side of suspension line stowage tray (Figure 27).



6.2-5703B

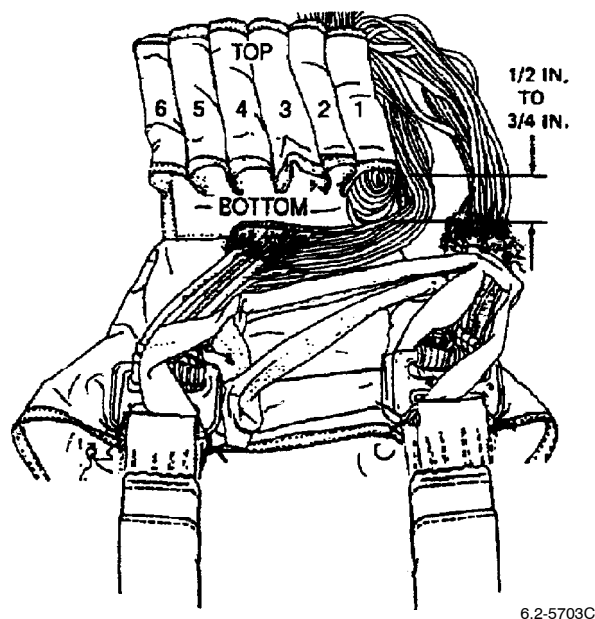
Figure 27. Form a Bight in Suspension Lines

CAUTION

To prevent damage to suspension line stowage tray sleeves ensure that size of parachute packing hook end does not exceed diameter of stowage tray sleeves and is long enough to hold suspension lines. Ensure that suspension lines are stowed in sleeve ends facing toward parachute and lines are maintained in proper alignment. Lines shall not be twisted or crossed over each other.

e. Separate right-hand group of lines from left-hand group. This separation must be maintained during remainder of packing procedure.

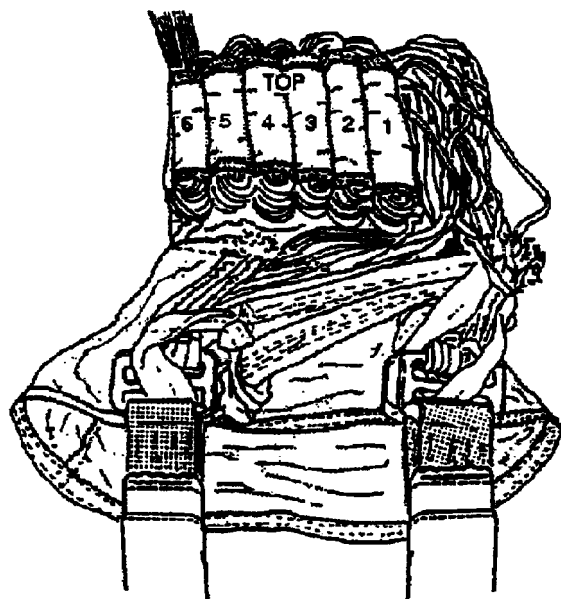
f. Stow first bight of suspension lines in sleeve 1 starting at top of sleeve and pulling towards bottom on helper's side with a parachute packing hook. Ensure that all bights protrude 1/2 to 3/4-in. from ends of sleeve. Ensure that suspension lines are stowed into sleeve top end facing toward canopy and suspension lines are maintained in proper alignment (Figure 28). (QA)



6.2-5703C

Figure 28. Stow First Bight

g. Continue stowing lines into sleeves 2 thru 6. Ensure that lines passing from one sleeve to next are pulled taut (Figure 29).



6.2-5703D

Figure 29. Continue Stowing Lines

h. Roll suspension line stowage tray from packers side to helpers side (Figure 30). (QA)

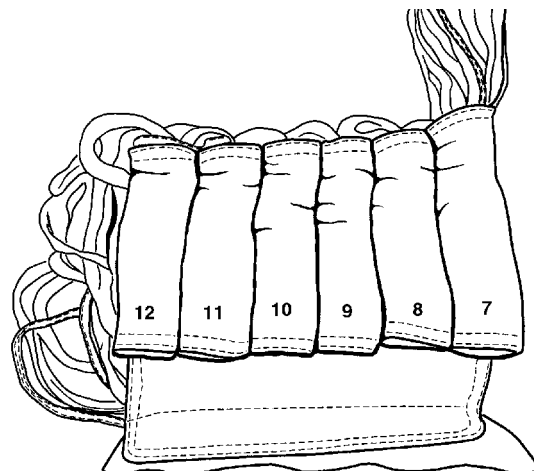


Figure 30. Fold Suspension Line Stowage Tray

i. Place group of lines nearest packer to opposite side of other group.

j. Grasp lines at bottom of sleeve and at a point about 7-in. down the lines toward canopy.

k. Fold lines back over stowage tray to form a bight.

l. Grasp bight and stow it into sleeve top end with a packing hook.

m. Continue stowing lines in same manner until all sleeves are filled. Lines will emerge from last stow in a side-by-side position (Figure 31). (QA)

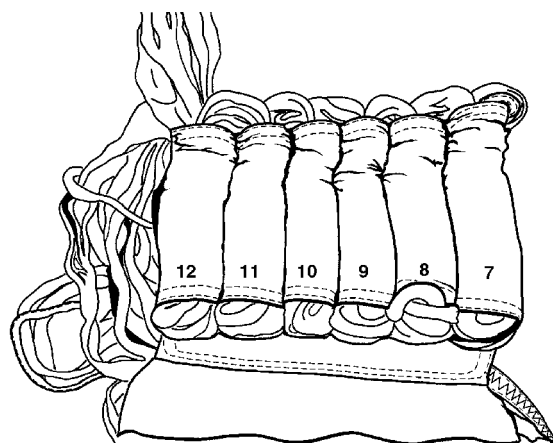


Figure 31. Continue Stowing Lines Until all Sleeves are Filled

NOTE

There is no specific dimension for length of suspension line remaining between last stow and canopy skirt.

n. Roll suspension line stowage tray from helpers side to packers side (Figure 32). (QA)

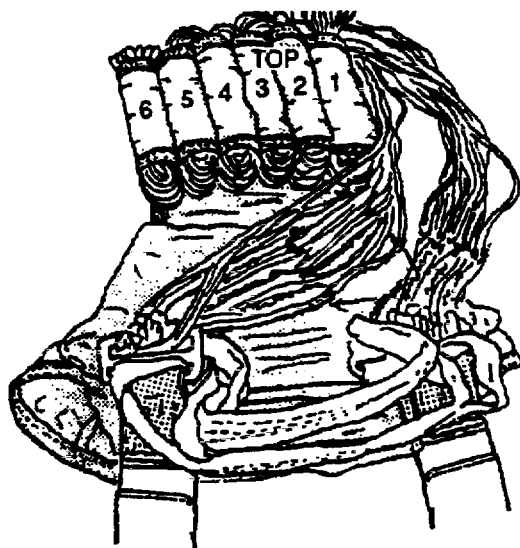


Figure 32. Carefully Fold Back Stowage Tray Towards Canopy

o. Carefully fold stowage tray toward risers and pull protective cover over and around stowage tray. Ensure that protective cover encloses stowage tray sleeves (Figure 33).

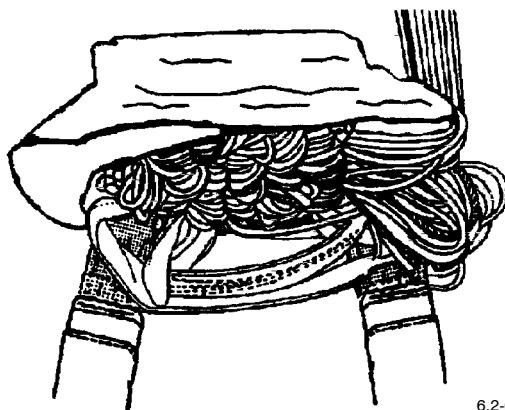


Figure 33. Carefully Fold Back Stowage Tray Towards Risers

p. Separate each pair of risers. Ensure that tackings, that secure steering lines to risers are intact. (QA) If broken, center steering lines on risers and tack to risers with waxed size A thread; tie off. Tacking should be located 1/8 to 1/4-in. below guide ring. Tack thru steering line and thru free end of bowline knot; tie off. Ensure that each steering line is correctly routed and centered between each pair of risers. Pass end loop around socket fastener. Secure loop by closing stud fastener into socket fastener. Secure fastener tape on steering line to tape on riser, install riser covers and secure (Figure 34). (QA)

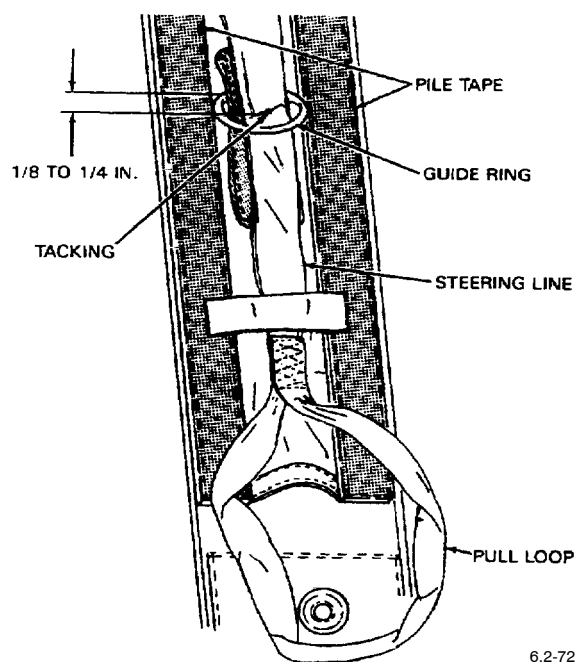
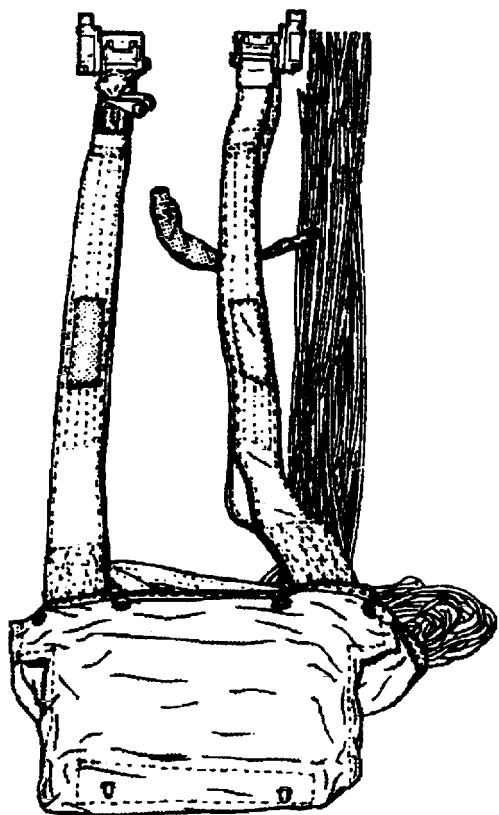


Figure 34. Separate Each Pair of Risers

q. Turn suspension line stowage tray and riser towards canopy with suspension line stowage tray studs facing away from canopy (Figure 35).

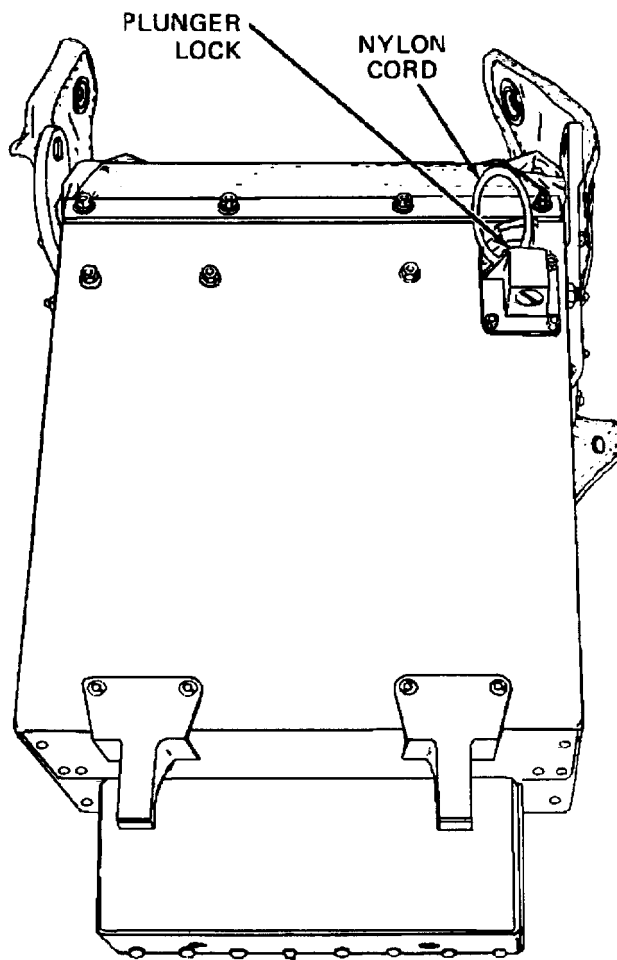


6.2-6127C

Figure 35. Turn Stowage Tray

18. ATTACHMENT OF SUSPENSION LINE STOWAGE TRAY TO CONTAINER.

- a. Ensure that container is empty and clean. Spray only containers with inside painted surfaces with release agent. Set container on packing table with rear side up.
- b. Pass a 2 ft. length of Type I or IA nylon cord around plunger lock which is located at upper side of container. Pass ends of cord thru hole in container (Figure 36).



6.2-5707A

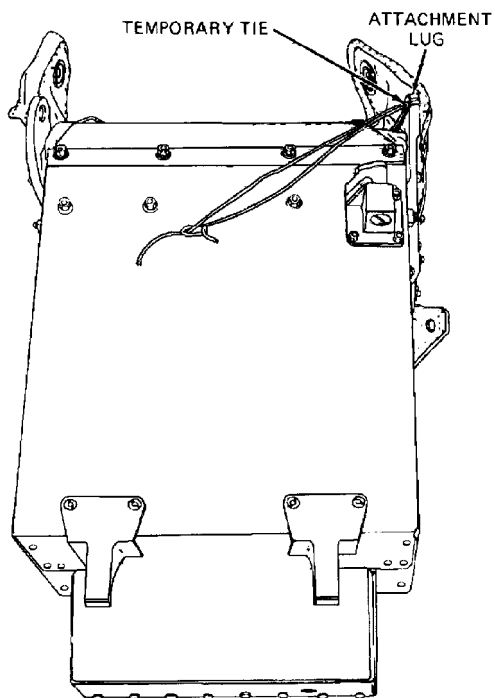
Figure 36. Pass 2 Ft. Length of Cord Around Plunger

- c. Pull cord tight and route ends out top of container. Tie temporarily to rear attachment lug (Figure 37).

NOTE

Nylon cord will be attached to parachute withdrawal line later in packing procedure.

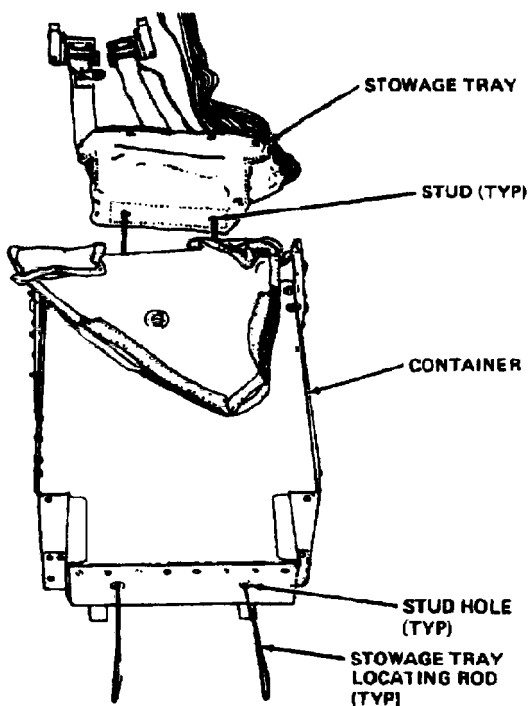
- d. Turn container and position so that open end faces toward canopy with front side of container up.



6.2-5707B

Figure 37. Pull Cord Tight

e. Pass two stowage tray locating rods thru stud holes in bottom of container. Attach locating rods to studs on bottom of stowage tray (Figure 38).



6.2-6128A

Figure 38. Insert Tray Locating Rods

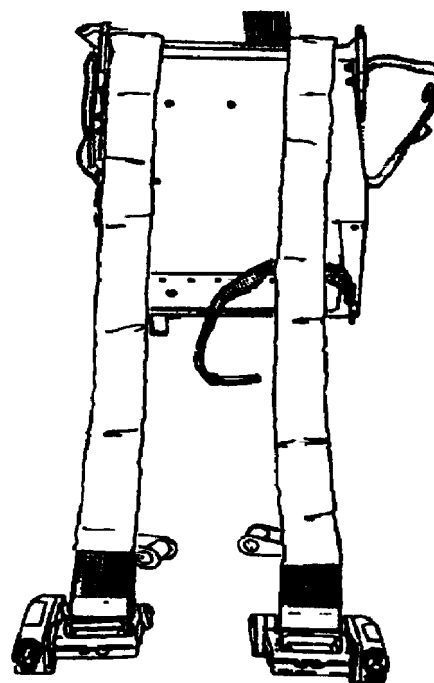
f. Using locating rods, pull stowage tray into bottom of container. Ensure that stowage tray studs protrude thru hole in bottom of container and no suspension lines are trapped between stowage tray and container. (QA)

g. Remove stowage tray locating rods.

h. Attach two washers and nuts to studs on container bottom and tighten to 20 in-lbs. (QA)

i. Apply torque seal to nuts on forward portion of container.

j. Place risers on front face of container (Figure 39).

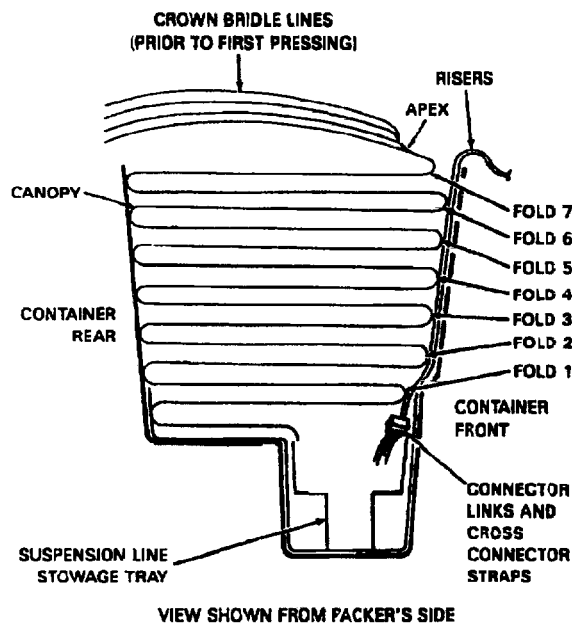


6.2-6128B

Figure 39. Place Risers on Container

19. STOWAGE OF CANOPY.

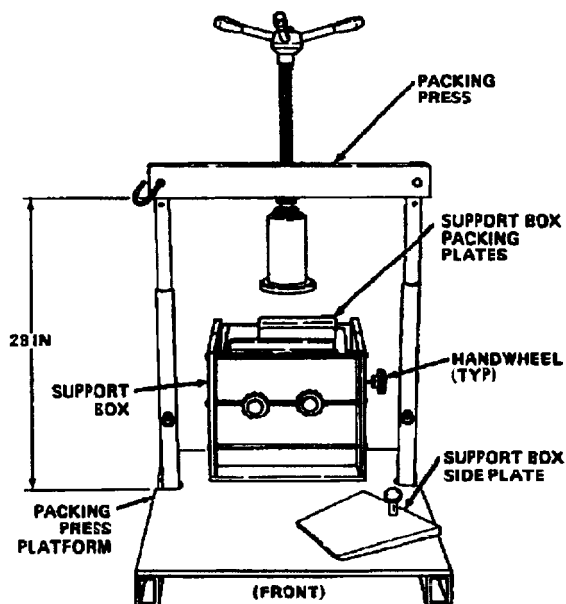
a. Canopy shall be S-folded into container from rear to front. Use following illustration as a guide while stowing canopy (Figure 40).



6.2-5709A

Figure 40. Canopy Shall Be S-Folded

b. Place support box with packing plates at front edge of packing press platform. The vertical distance from platform to bottom of top beam shall be 28-in. Remove support box side plate with handle and loosen three handwheels (Figure 41).



6.2-5709B

Figure 41. Placement of Support Box

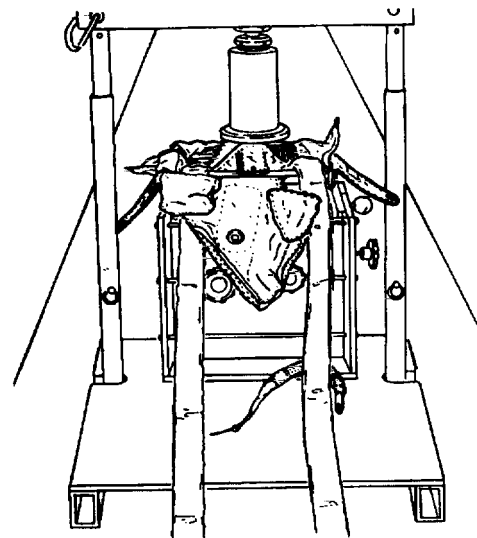
CAUTION

To preclude any damage to canopy, a packing stick should not be used to pack canopy down. Use hand pressure only.

Do not lubricate packing press bearing.

Ensure that handwheels on support box are tightened finger tight only.

c. With front of container facing toward front of packing press, place container and support box side plate in support box. Lift rear and front packing plates and ensure grooves in plates fit over nuts on rear and front of container. Center container in support box and extend closure flaps outward. Route risers out front of container. Tighten three handwheels finger tight only (Figure 42).



6.2-5709C

Figure 42. Placement of Side Plate

d. Remove shot bag from canopy skirt.

NOTE

Ensure that flaps remain outside container when stowing canopy.

e. Ensure that shape of stowage tray protective cover conforms to bottom of container base. With stowage tray located upright in container, ensure that suspension lines emerge from helper's side rear corner. Stow remaining suspension lines across interior of container by faking them back and forth from helper's to packer's side. Position lines between stowage tray sleeves and protective cover (Figure 43). (QA)

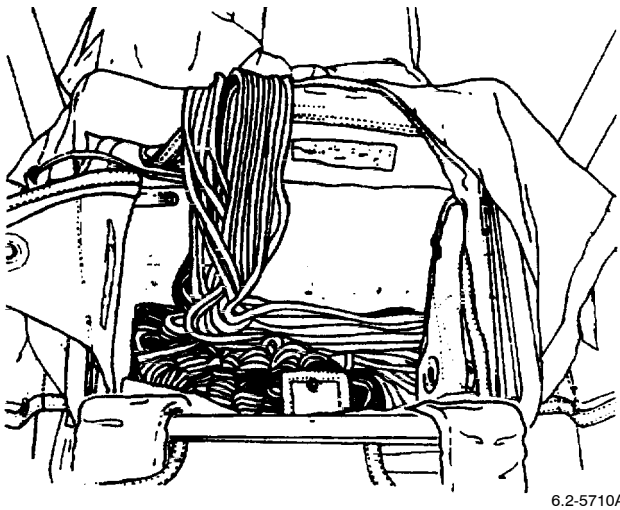


Figure 43. Ensure Shape of Stowage Tray Protective Cover Conforms To Container Base

f. Grasp cross-connector straps and place them below connector links across front surface and near bottom of container. Press suspension lines in stowage tray against front surface of container between risers. Fold skirt of canopy under and place in back of stowage tray so that skirt is against stowage tray. S-fold canopy from rear to front into container (Figure 40). Remove shot bags as canopy is stowed. (QA)

g. Pack canopy down into container with last fold toward front and with crown bridle lines facing packing table (Figure 44).

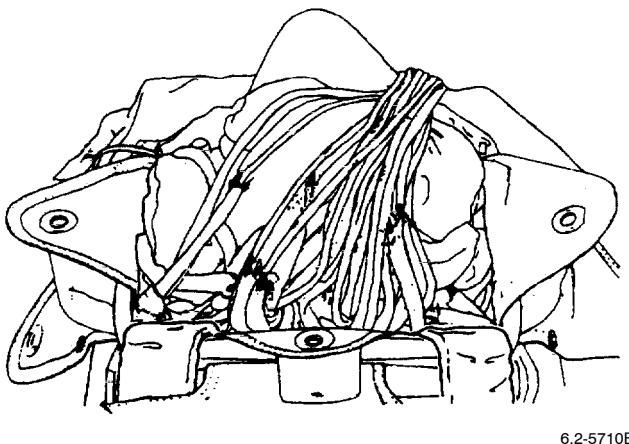


Figure 44. Pack Canopy Down into Container

h. Place small packing press block, cushioned side down with angled corner at packer's corner of container, on top of canopy.

i. Align support box under packing press so that packing press block does not touch container during compression (Figure 45).

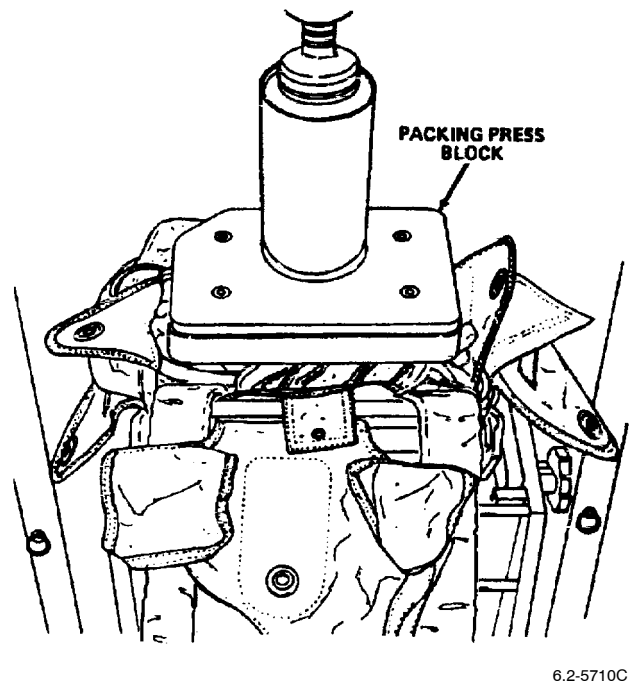


Figure 45. Align Support Box Under Packing Press

CAUTION

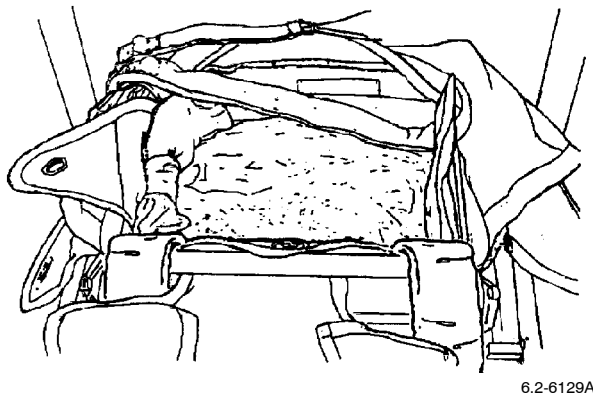
To prevent damage to container or packing press during compression, ensure that packing press block remains at center of container.

j. Manually turn three-pronged handle on packing press, compressing canopy with a moderate force. Using a torque wrench, increase compressive force by applying 50 ft. lbs. to hex nut on top of handle or until handle bottoms out. Keep canopy under compression for about 5 min. Canopy shall be compressed below inner closure flaps. (QA)

k. Release compression and remove packing press block.

l. Fake crown bridle lines across container from packer's to helper's side, front to rear.

m. Stow sleeve-protected shackle into packer's rear corner of container with parachute withdrawal line located across rear inside edge of container. The withdrawal line should emerge from container at packer's rear corner with withdrawal line facing up (Figure 46). (QA)

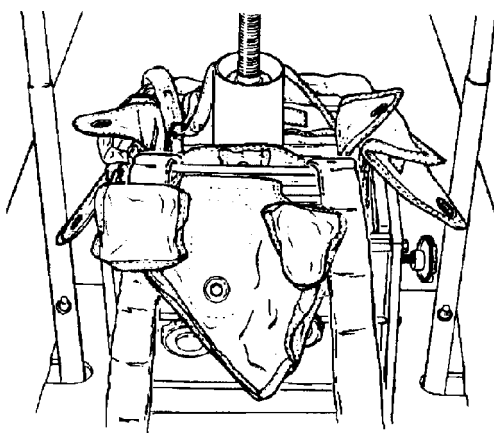


6.2-6129A

Figure 46. Stow Sleeve-Protected Shackle into Packer's Rear Corner of Container

n. Center support box with container under packing press plate. Place small packing press block, cushioned side down with angled corner at packer's rear corner of container, on top of lines. Ensure that packing block does not contact container during compression. (QA)

o. Manually turn three-pronged handle on packing press, compressing lines with a moderate force. Using a torque wrench, increase the compressive force until pack pressing block is even with bottom flap attachments, but do not exceed 50 ft. lbs. Keep under compression for 1 hr. minimum (Figure 47). (QA)



6.2-6129B

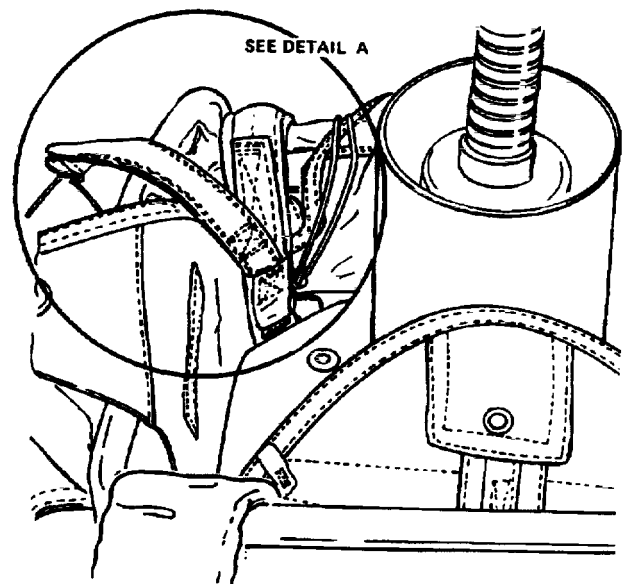
Figure 47. Manually Turn Three-Pronged Handle on Packing Press

p. Untie Type I or IA nylon cord from rear container lugs.

NOTE

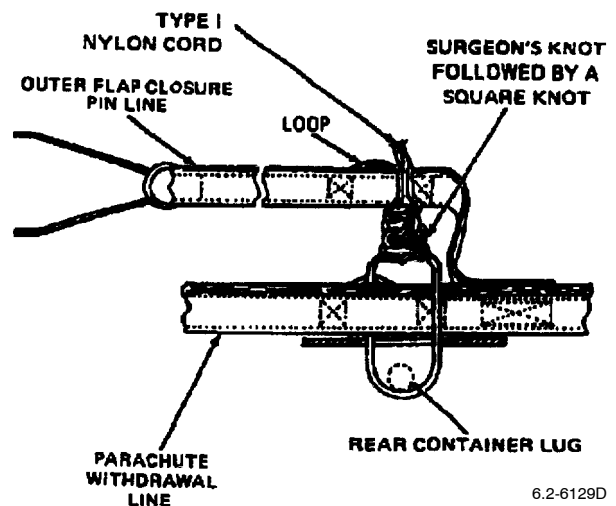
Do not cut ends of Type I or IA nylon cord.

q. Pass one end of Type I or IA nylon cord thru loop in parachute withdrawal line. Pass other end of cord around parachute withdrawal line. Tie to other end of cord with a surgeon's knot followed by a square knot (Figure 48 and 49). (QA)



6.2-6129C

Figure 48. Pass One End of Nylon Cord thru Loop

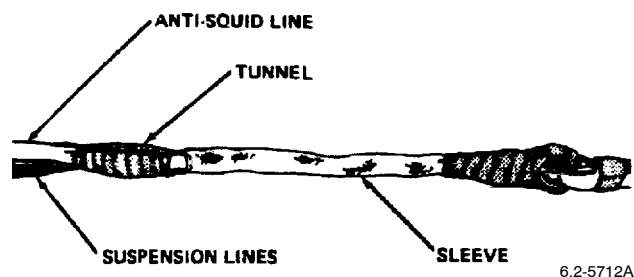


6.2-6129D

Figure 49. Tie Off Cord

20. FOLDING OF STABILIZER DROGUE PARACHUTE.

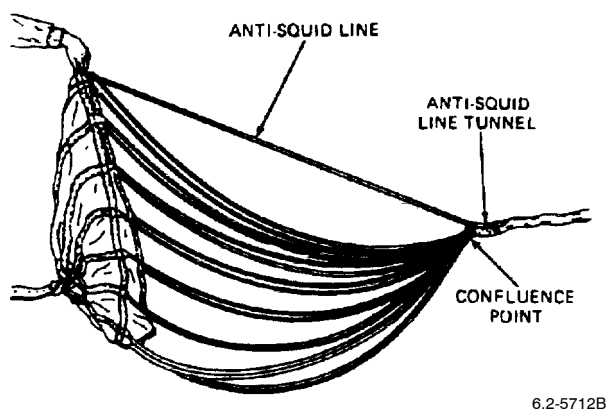
- Spread out stabilizer drogue by drawing suspension lines taut.
- Position sleeve-protected lines so that anti-squid line tunnel is at top (Figure 50).



6.2-5712A

Figure 50. Positioning of Sleeve-Protected Lines

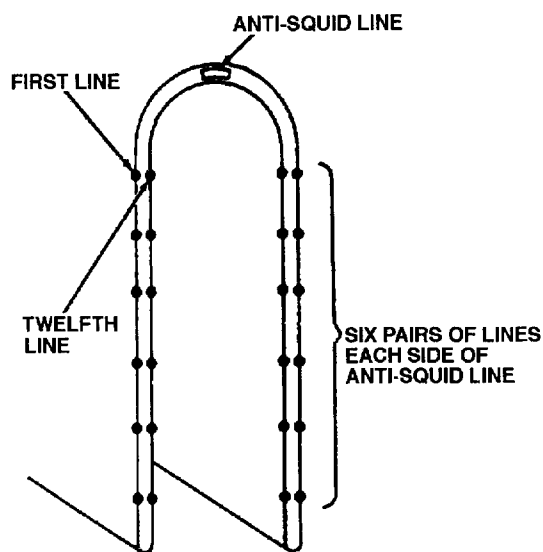
- Hold anti-squid line, which extends from tunnel to skirt hem, at skirt. Suspension lines will become untangled and will fall to either side of anti-squid line (Figure 51). (QA)



6.2-5712B

Figure 51. Hold Anti-Squid Line

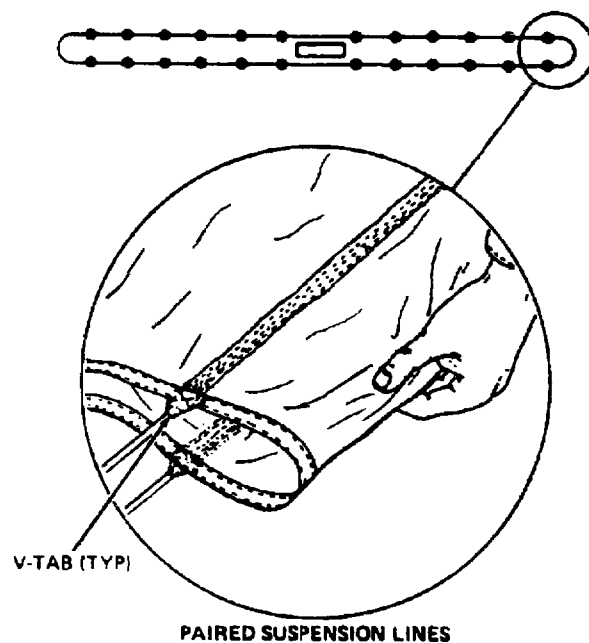
- Form two groups of 12 lines each and position each group to either side of anti-squid line. Ensure that anti-squid line remains in center (Figure 52).



6.2-5712C

Figure 52. Form Two Groups of Twelve Lines

- Pair off suspension lines so there are six pairs on each side of anti-squid line. Align V-tabs at skirt (Figure 53).



6.2-5712D

Figure 53. Pair Off Suspension Lines

f. S-fold packer's side of parachute while maintaining alignment of V-tabs (Figure 54).

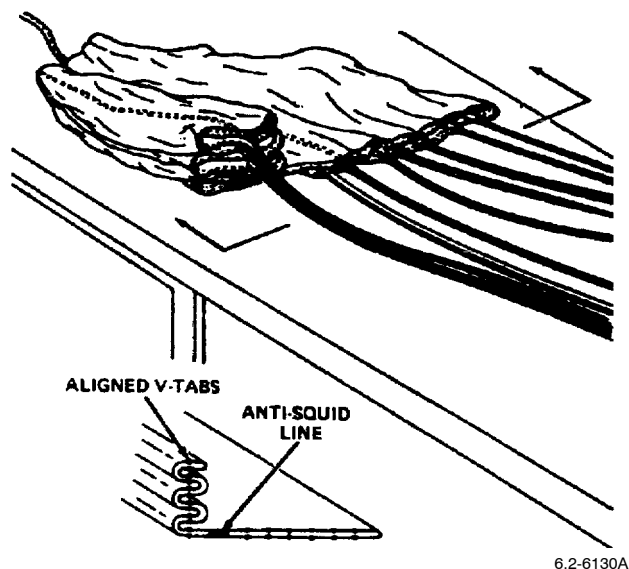


Figure 54. S-Fold Packer's Side of Parachute

g. S-fold helper's side of parachute while maintaining alignment of V-tabs. Ensure anti-squid line is positioned between two groups of folds and suspension lines (Figure 55). (QA)

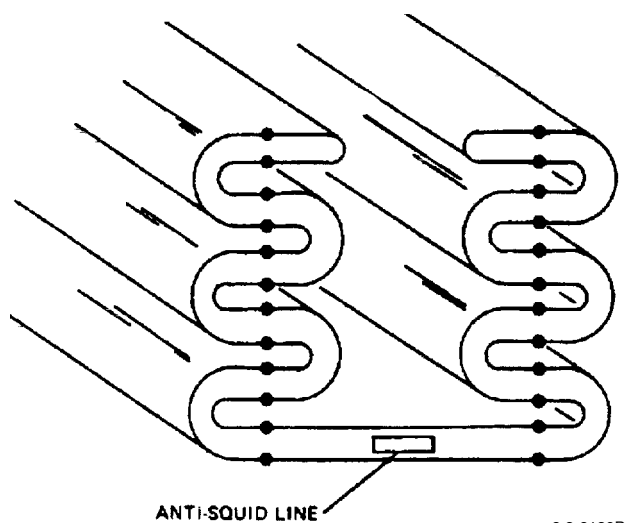


Figure 55. S-Fold Helper's Side of Parachute

h. Grasp the two sets of folds at skirt and rotate group of folds on helper's side under group of folds at packer's side (Figure 56).

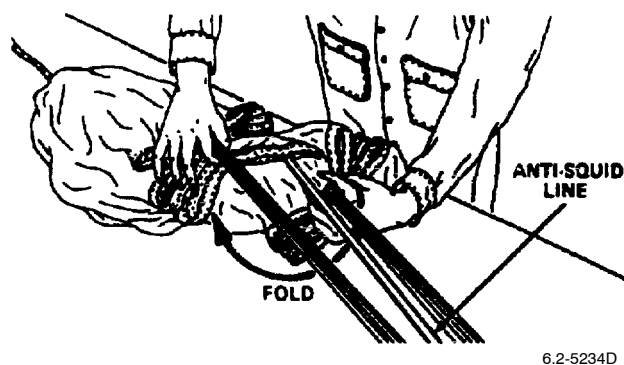


Figure 56. Grasp Two Sets of Folds at Skirt

i. Straighten folds, align V-tabs and ensure anti-squid line is free to confluence point (Figure 57). (QA)

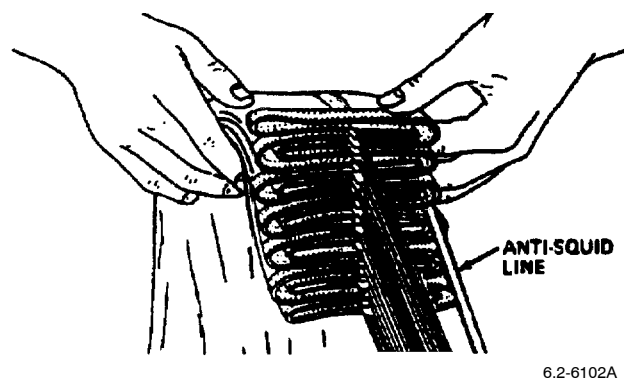
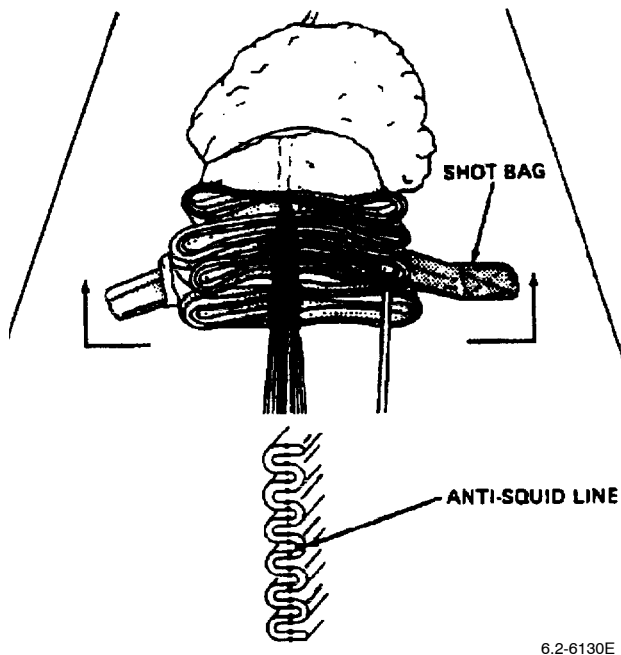


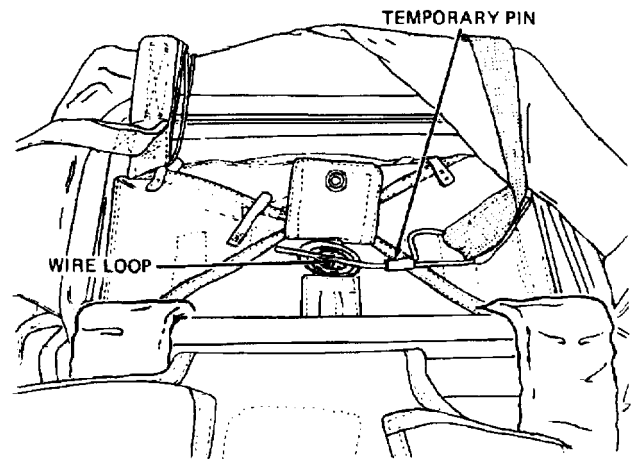
Figure 57. Straighten Folds and Align V-Tabs

j. Place shot bag on folded drogue parachute at skirt hem (Figure 58).



6.2-6130E

Figure 58. Placement of Shot Bag



6.2-5714

Figure 59. Close Inner Flaps

d. Cut four lengths of size FF thread waxed. Pass a single length thru loops at packer's front, helper's front and rear corners of inner closure flap. Tie off; trim ends (Figure 60).

21. CLOSING CONTAINER INNER FLAPS.

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

NOTE

Parachute assembly should be compressed enough to permit closure of flaps

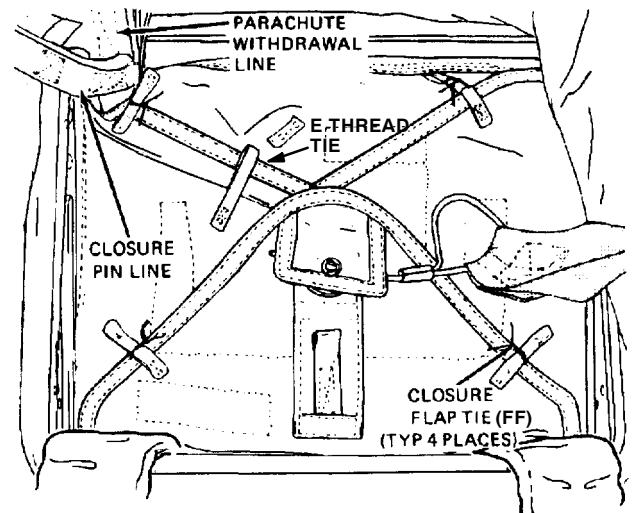
a. Release compression and remove packing press block.

NOTE

If parachute assembly rises when compression is released so that flaps cannot be closed, repeat Paragraph 19.n thru 19.o in stowage of canopy.

b. Move support box forward to clear packing press.

c. Close inner flaps in the following sequence: rear, helper's, packer's and front, insert a temporary pin thru wire loop (Figure 59).

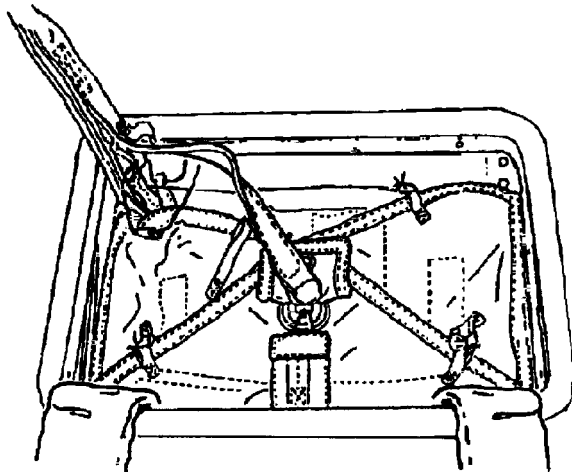


6.2-5714A

Figure 60. Cut Three Lengths of Thread

e. Cut a length of size E thread waxed, ensure that loop at packer's rear corner lies on top of parachute withdrawal line and not over closure pin line. Ensure that closure pin line is free of twists. Remove temporary pin and insert closure pin thru wire loop and into front flap pocket.

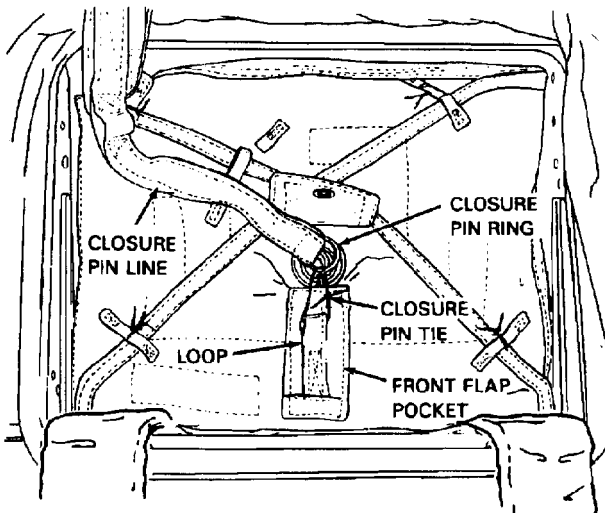
f. Pass a single length thru packer's rear corner loop, thru loop on main section of canopy withdrawal line and thru packer's corner front loop. Ensure that both free ends are under closure pin line; tie off. Trim ends (Figure 61).



6.2-5714B

Figure 61. Pass a Length thru Packer's Rear Corner Loop

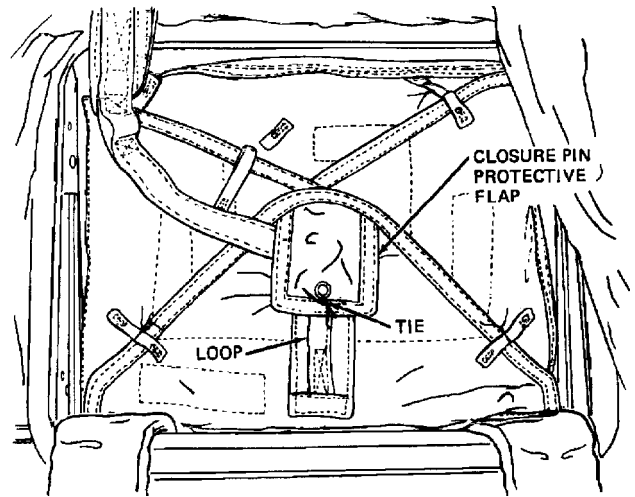
g. Cut a length size 3 thread waxed, and pass a single turn thru closure pin ring and fabric loop on front flap. Tie off; trim ends (Figure 62).



6.2-3572

Figure 62. Pass a Single Turn thru Closure Pin

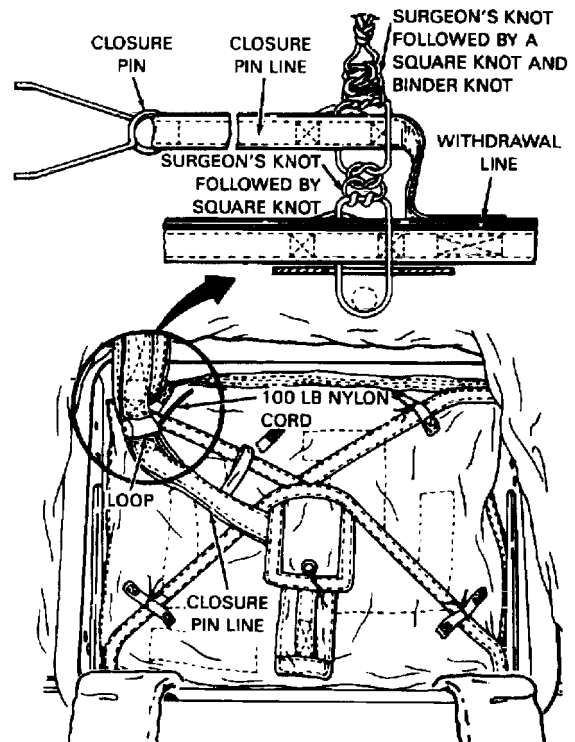
h. Cut a length of size A thread waxed. Fold closure pin protective flap and pass a single turn thru grommet on front flap and webbing loop on pocket. Tie off; trim ends (Figure 63).



6.2-3573

Figure 63. Fold Closure Pin Protective Flap

i. Pass one end of Type I or IA nylon cord, which is tied to withdrawal line, thru loop on closure pin line. Pass other end around closure pin line and tie off; trim ends (Figure 64). (QA)



6.2-3574

Figure 64. Pass a Length of Nylon Cord thru Loop Closure Pin

j. Cut a length of size E thread waxed, and pass thru remaining inboard loop. Ensure that long loop passes over closure pin line; tie off; trim ends (Figure 65).

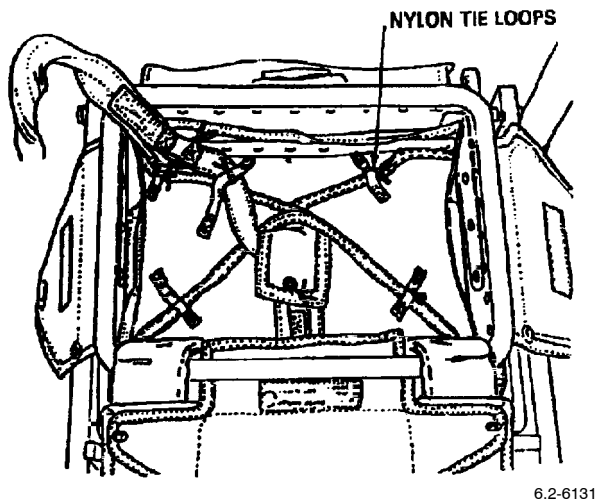


Figure 65. Pass a Length of Thread thru Remaining Inboard Loops

22. STOWAGE OF DUPLEX DROGUE PARACHUTE ASSEMBLY.

a. Place protective flap over canopy closure flaps (Figure 66).

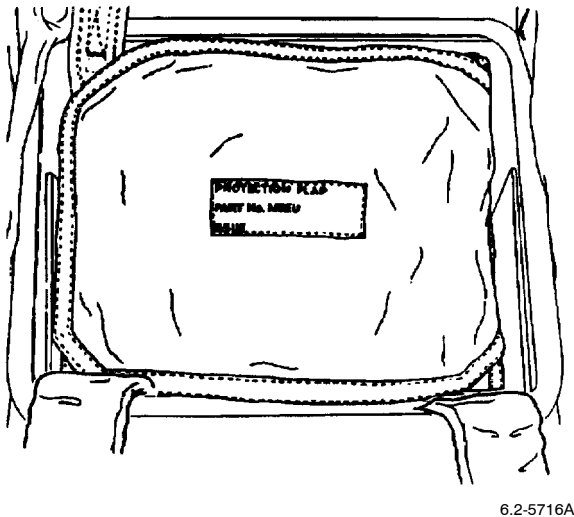


Figure 66. Placement of Protective Flap

b. Place eye end of stabilizer drogue at packer's front corner of container and route sleeve-protected portion of suspension lines toward helper's side of container. Route extender strap, which is attached to eye end along packer's side of container, toward rear corner.

Nut on bolt securing shackle must face packer's side. Extender strap shall emerge from container on outboard side of parachute withdrawal line. Excess portion of withdrawal line shall be stowed along rear inside edge of container (Figure 67). (QA)

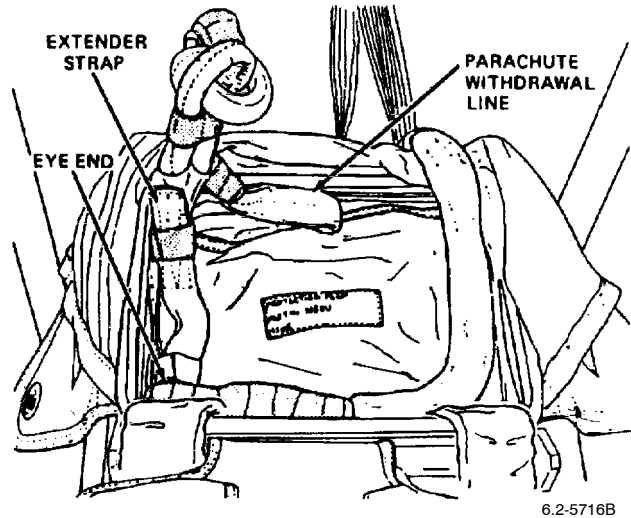


Figure 67. Place Eye End of Stabilizer Drogue at Packer's Front Corner

c. Stow sleeve-protected suspension lines around container with tunnel portion laid in helper's rear corner of container. Place excess suspension lines next to tunnel.

d. Continue stowing anti-squid line and suspension lines in a counterclockwise direction, leaving the center void. Helper shall hold parachute withdrawal line and assist in stowing suspension lines (Figure 68).

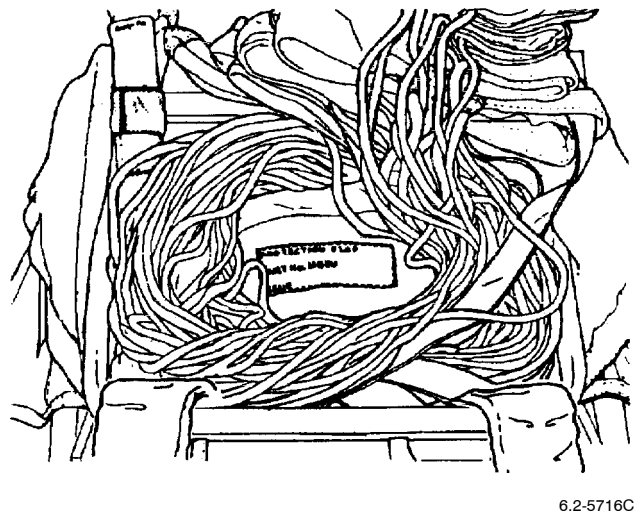
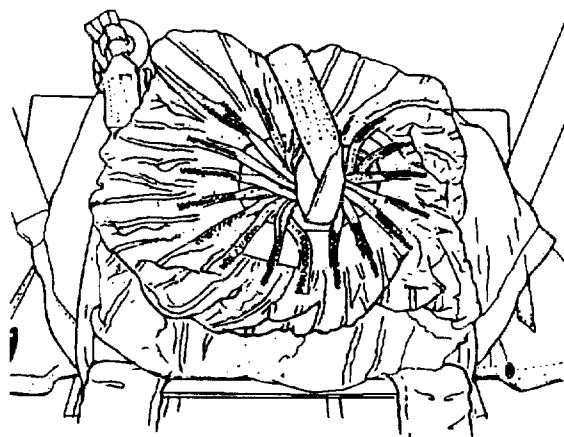


Figure 68. Continue Stowing Anti-Squid Line

e. Pack parachute skirt into void area and S-fold remainder from front to rear of container.

f. Spread out parachute apex in center of container (Figure 69).

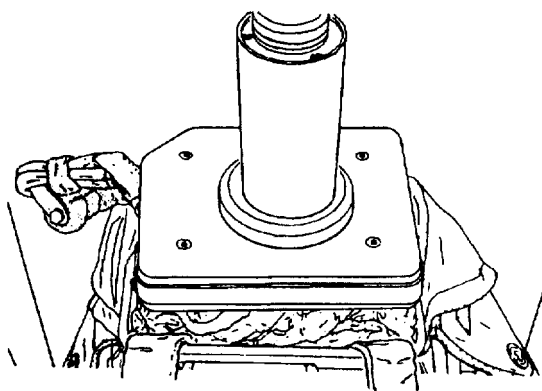


6.2-5716D

Figure 69. Spread Out Parachute Apex

g. Center container under press.

h. Place large packing press block, cushioned side down with angled corner at packer's rear corner of container, on top of stabilizer drogue. Align support box under packing press so that packing block does not touch container during compression (Figure 70).



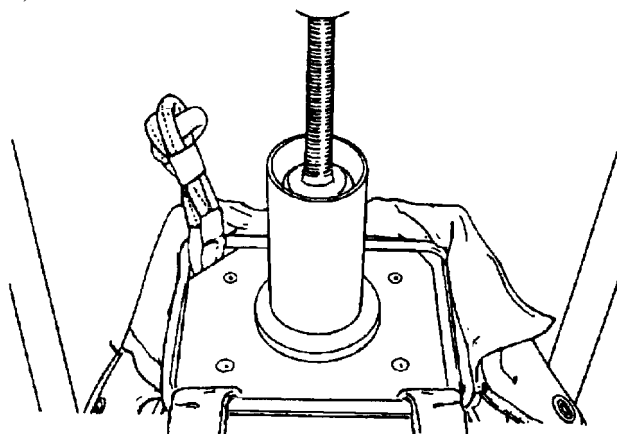
6.2-5717A

Figure 70. Placement of Large Packing Press Block



To prevent damage to container and packing press, ensure that packing block remains at center of container. Do not exceed 30 ft. lbs.

i. Manually turn three-pronged handle on packing press until a moderate amount of compressive force is applied. Tuck drogue parachute material into sides of container as pressure is applied. Using a torque wrench on nut atop handle, increase compressive force until top surface of packing block is 1/4 to 1/2-in. above front edge of container. Do not exceed 30 ft. lbs. Keep drogue under compression for 30 min. minimum (Figure 71).

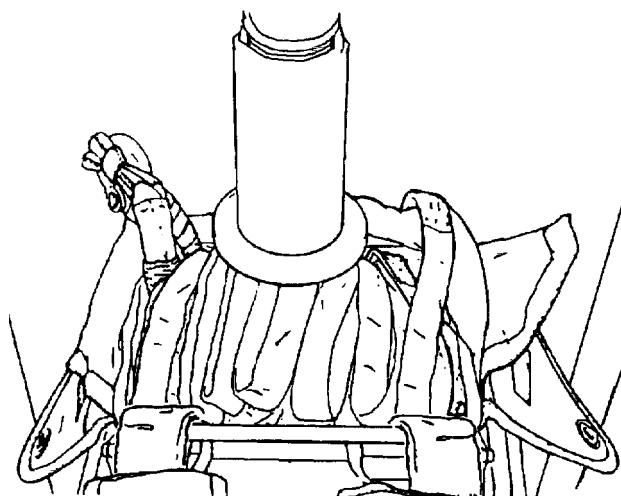


6.2-5717B

Figure 71. Apply a Moderate Amount of Compressed Force

j. After 30 min. release compression and remove packing press block.

k. Fake drogue connector line from rear to front going from packer's to helper's side across top of stabilizer drogue apex. Pack connector line into container with packing fid (Figure 72). (QA)



6.2-5717C

Figure 72. Fake Drogue Connecting Line from Rear to Front

l. Continue stowing and packing connector line until eye end of controller drogue is positioned at helper's rear corner of container. Controller drogue suspension lines shall emerge at helper's front corner of container. Tuck riser protective flaps down inside front edge of container (Figure 73). (QA)

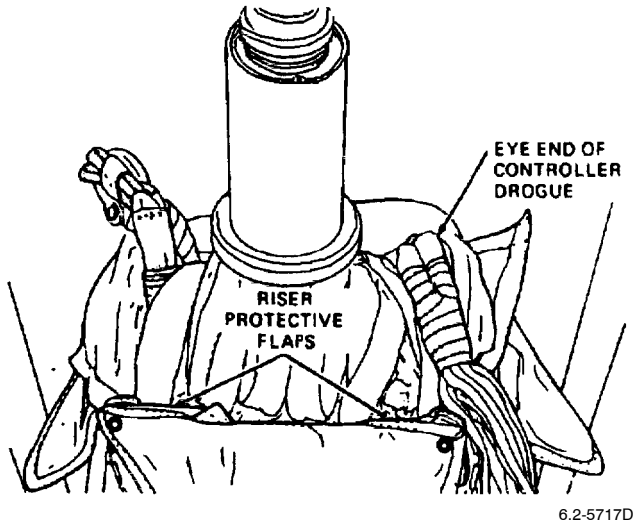


Figure 73. Continue Stowing and Packing Connector Line

m. Spread and pack protective flap to cover connector line and eye end of controller drogue parachute. Tuck cover along two sides and rear. Place controller drogue parachute suspension lines on protective flap. Spread out controller drogue parachute with apex at center of container and with drogue withdrawal line emerging at helper's rear corner with closure pin facing up (Figure 74). (QA)

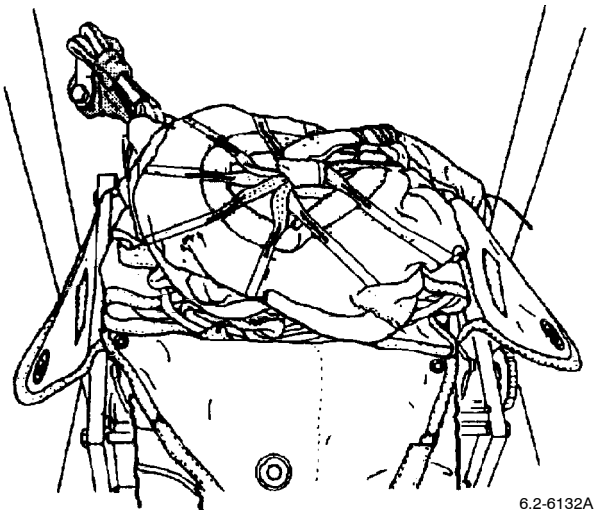


Figure 74. Spread and Pack Protective Flap

n. Place drogue protective flap over controller drogue parachute. Wrap hook and pile fastener around extender strap and parachute withdrawal line. Ensure that drogue withdrawal line emerges from opening at helper's side of protective flap (Figure 75).

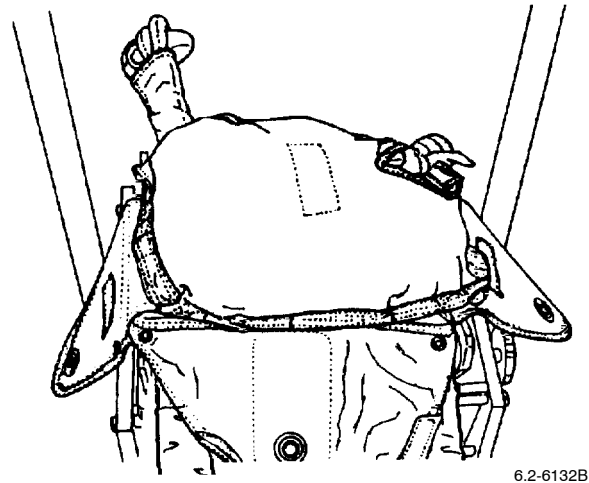


Figure 75. Place Drogue Protective Flap Over Controller Drogue

o. Place large packing press block, cushioned side down with angled corner at packer's rear corner of container, on top of drogue protective flap. Align support box under packing press so that packing block does not touch container during compression (Figure 76).

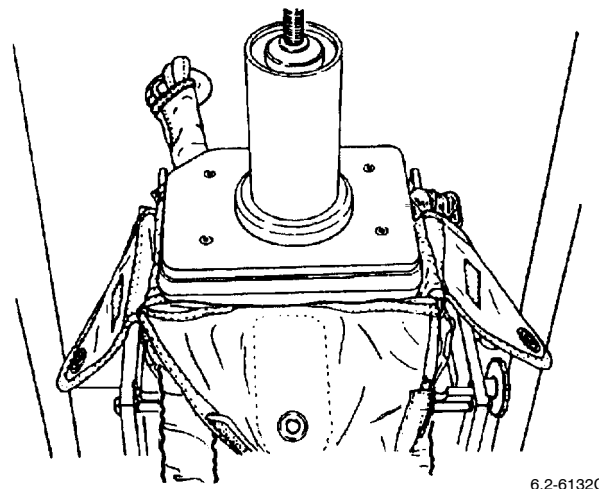


Figure 76. Place Large Packing Press Block on Top of Drogue Protective Flap

CAUTION

To prevent damage to container and packing press, ensure that packing block remains at center of container.

p. Manually turn three-pronged handle until a moderate amount of compressive force has been applied.

CAUTION

Do not exceed 30 ft. lbs. force

q. Using a torque wrench, increase compressive force until top surface of packing block is 1/2 to 3/4-in. above top edge of container. Do not exceed 30 ft. lbs. Pack edges of protective flap down while increasing compression. Keep parachutes under compression for a minimum of 1 hr.

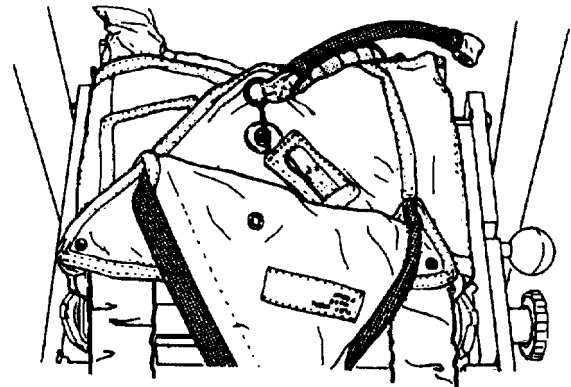
23. CLOSING OUTER FLAPS.**NOTE**

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Release compression and remove packing press block. Move support box forward to clear packing press.

b. Close outer flaps in following sequence: rear, helper's side, packer's side, front. Use a length of cord to pull closure pin loop on inner rear flap thru grommets in outer flaps. (QA)

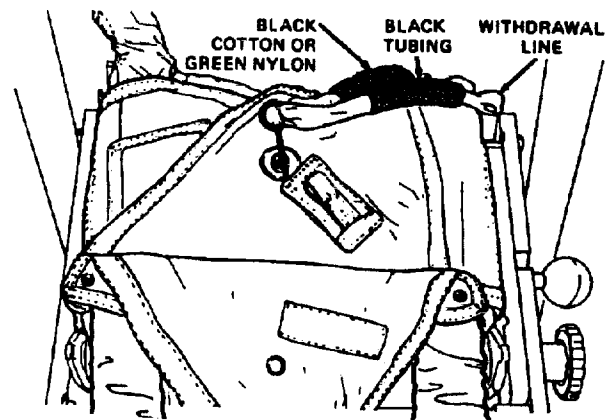
c. Insert closure pin attached to controller drogue parachute withdrawal line thru closure pin loop and into fabric pocket on front flap. Remove pull-up cord from closure pin loop (Figure 77).



6.2-6133A

Figure 77. Insert Closure Pin

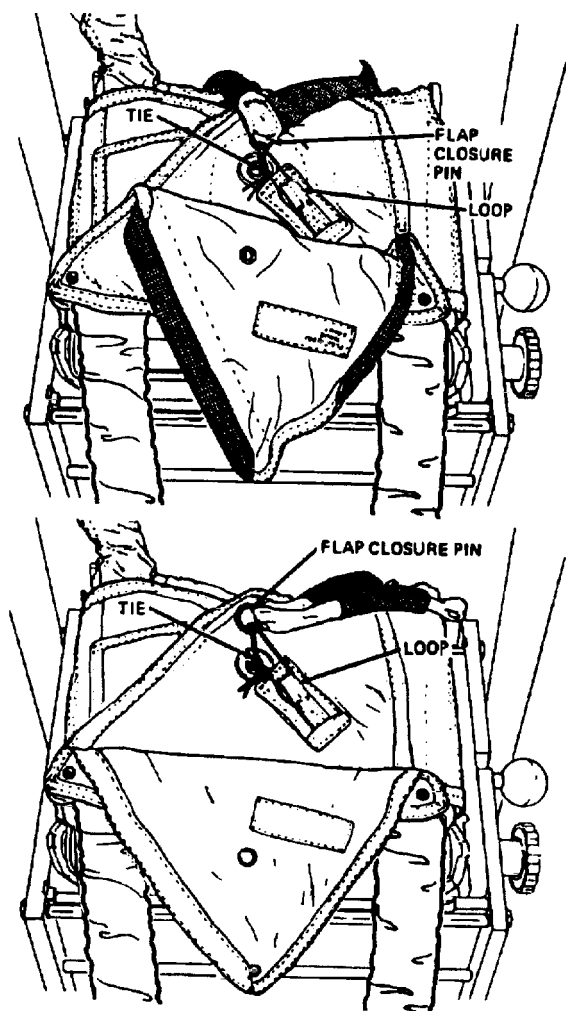
d. (Parachute assembly with drogue withdrawal line assembly P/N MBEU69922). Insert closure pin attached to controller drogue withdrawal line thru wire loop and into fabric pocket on front flap. Ensure that cord from wire loop is removed. Route drogue withdrawal line (black tubing section-spool end) aft towards helper's side and forward along side of drogue withdrawal line (black cotton or green nylon section from drogue parachute) (Figure 78).



6.2-6133B

Figure 78. Insert Closure Pin

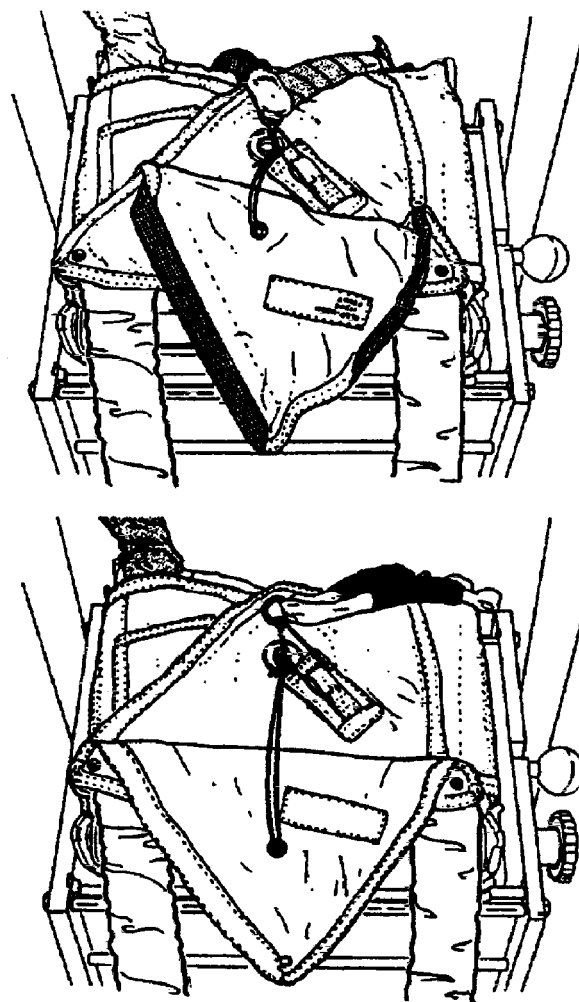
e. Secure closure pin in position by passing a length of size 6 thread, single and waxed, thru flap closure pin and thru loop on pocket; tie off (Figure 79). (QA)



6.2-6133C

Figure 79. Secure Closure Pin

f. Using a 24-in. length size 6 thread, single and waxed, pass it around legs of closure pin, forward of closure pin loop and then both ends thru top of front flap grommet (Figure 80).



6.2-6134A

Figure 80. Secure Closure Pin

NOTE

The 24-in. length of size 6 thread extending thru grommet is tied to scissor shackle release when parachute container is installed in ejection seat.

g. Tie down corners of front flap on helper's and packer's side with one turn of size FF thread, single and waxed, thru grommets on flaps; tie off. Close flap over closure pin.

h. (Parachute assembly with outer front flap installed). Close flaps over closure pin by affixing hook and pile fasteners. Tie down corners of front flap and center aft end of flap with size FF thread, single and waxed. Pass thread thru grommets on flaps and then thru loop on lower flap; tie off (Figure 81).

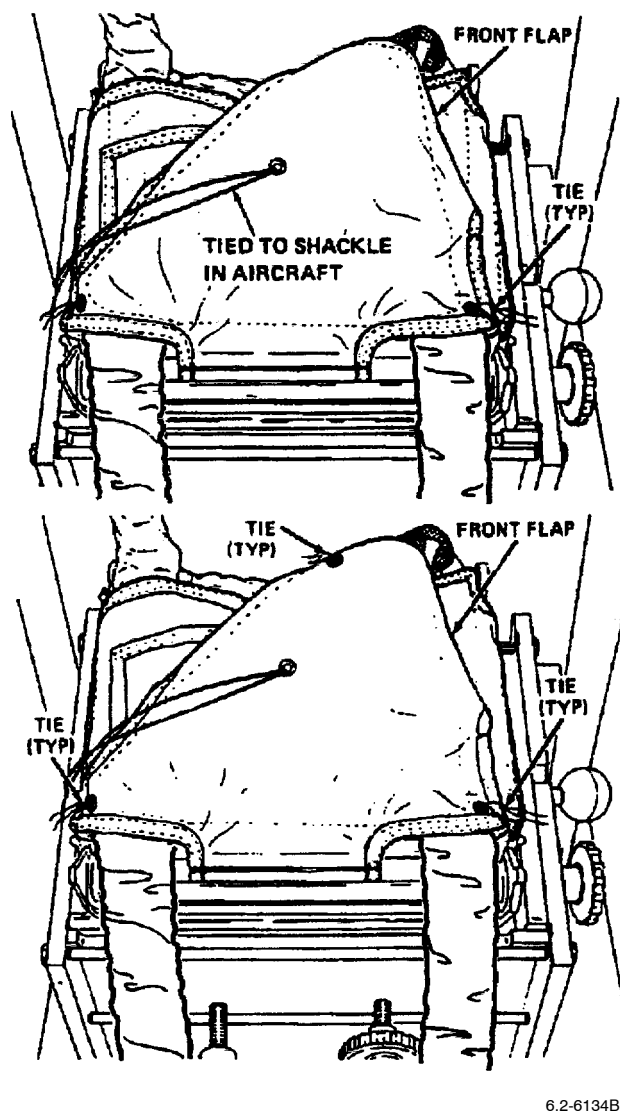


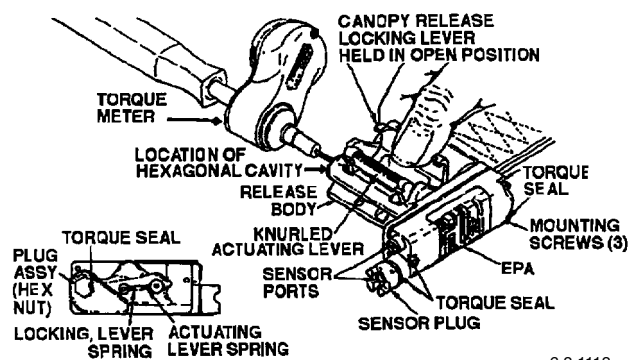
Figure 81. Close Flaps Over Closure Pin

24. PARACHUTE HARNESS SENSING RELEASE UNIT (PHSRU), MXU-746/P AND MXU-747/P.

a. Measure the knurled actuating lever torque as follows:

(1) Hold locking lever in the open position and insert the torque meter with 1/16-in. hex head driver into actuating lever cavity.

(2) Rotate actuating lever to just prior to contact with body. Acceptable torque values are 28 to 50 in.-oz. (Figure 82). (QA)



6.2-1112

Figure 82. Rotate Actuating Lever

b. Check battery voltage as follows:

- (1) Install test leads in multimeter observing proper polarity.
- (2) Select VDC and scale exceeding 26 VDC.

CAUTION

Avoid touching the meter probes together when making this test. Firing of the PHSRU may result.

(3) Contact negative (black) probe to sensor plug assembly center conductor. Contact positive (red) probe to EPA sensor center conductor.

(4) Reading of +22.5 volts DC or greater indicates PHSRU is serviceable. (QA)

c. If plug assembly was removed, perform the following:

(1) Forward complete packed parachute assembly to either non-destructive inspection lab or medical facility for X-ray.

(2) From review of X-ray (Figure 83), if plug assembly is suspected or known to be partially or fully recessed, the unit shall have a shear pin integrity check per WP 024 02.

(3) Record inspection on Parachute Record (OPNAV 4790/101).

(4) Attach X-rays to the Parachute Record (OPNAV 4790/101).

(5) If voltage is below +22.5 volts DC, replace battery per WP 024 02.

(6) Record voltage for each EPA in the Local Use Block on the Parachute Record (OPNAV 4790/101).

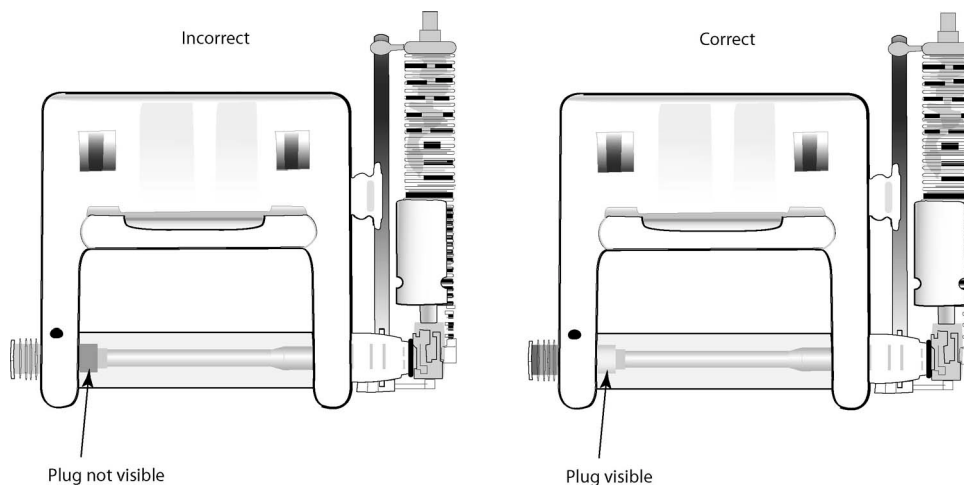


Figure 83. PHSRU X-Ray

25. FINAL CHECKOUT.

a. Loosen three handwheels on support box. Remove side support plate and container.

b. Replace/install headrest cushion on front of container. Reinstall four mushroom head bolts. Torque to 25 in-lbs. (QA)

c. Route risers down front of container and affix riser ends to hook and pile fasteners on each side of container.

d. Check height of packed parachute 12 hrs after completion of packing and no pressure. Height of packed parachute shall not exceed 14 1/2-in. (Figure 84). (QA)

e. Account for all packing tools.

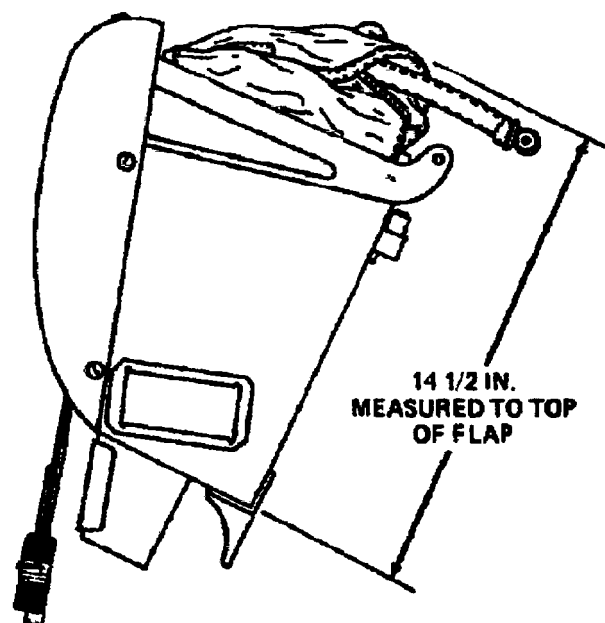
f. Examine packed parachute for general condition. (QA)

g. Packer shall complete and sign Parachute Record (OPNAV 4790/101). (QA)

h. QA inspector shall examine completeness and accuracy of all entries on Parachute Record (OPNAV 4790/101).

i. QA inspector shall sign Parachute Record (OPNAV 4790/101).

j. Send a (legible) copy of new Parachute Record to: Commander, Code 461000D, NAVAIRWARCENWPN-DIV, 1900 N Knox Road Stop 6206, China Lake, CA 93555-6106.



6.2-5720

Figure 84. A/P28S-24 Dimensional Check

INTERMEDIATE AND DEPOT MAINTENANCE

REPAIR PROCEDURES

A/P28S-24 PERSONNEL PARACHUTE ASSEMBLY

PART NO. MBEU10030PA-4

List of Effective Work Package Pages

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2 thru 13	9	16 thru 18	9				

Reference Material

Common Repairs	WP 004 00
Intermediate and Depot Maintenance, Maintenance Procedures, Parachute Harness Sensing Release Units (PHSRU), MXU-746/P and MXU-747/P	WP 024 02
Intermediate and Depot Maintenance, Original Issue Rigging Procedures, Parachute Harness Sensing Release Units (PHSRU), MXU-746/P and MXU-747/P	WP 024 01
Intermediate and Depot Maintenance, Packing Procedures, A/P28S-24 Personnel Parachute Assembly	WP 018 02
Introduction	WP 002 00
Parachute Loft Requirements/Administration	WP 003 00
Support Equipment	WP 005 00

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Record of Applicable Technical Directives

None

1. INTRODUCTION.

a. This work package (WP) contains instructions for maintenance, repair, replacement and fabrication of various parachute parts or subassemblies to ensure that proper items of equipment remain in a ready-for-issue (RFI) status. Selected repairs shall be documented on the Parachute Record. For common repairs refer to WP 004 00.

2. DROGUE PARACHUTE AND DROGUE WITHDRAWAL LINE REPAIRS.

a. Repair of the drogue parachute and/or withdrawal line is limited to the following:

- (1) Cleaning of contaminated areas.
- (2) Replacement of loose or broken tacking.

b. Replace drogue parachute and/or withdrawal line for any of the following:

- (1) Service/total life has expired per WP 018 02.
- (2) Holes, tears, seam separations and loose or broken stitching (yarn separation is acceptable) that may affect the safe operation of the parachute assembly.

3. REPLACEMENT OF DROGUE CONNECTING LINE AND ANTI-SQUID LINE.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

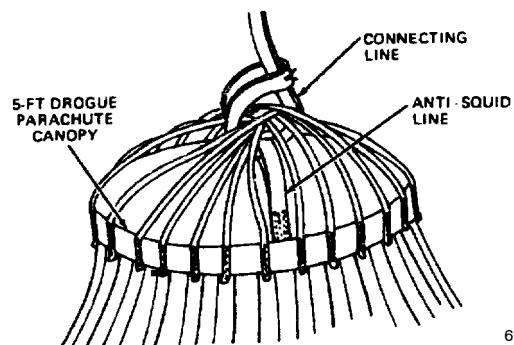
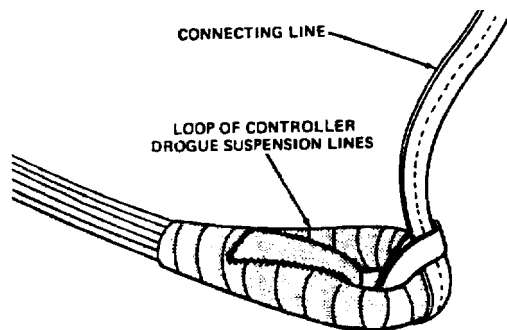
NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Inspect replacement connecting line per WP 018 02.

b. Pass one looped end of connecting line thru base loop of controller drogue. Route opposite end of line thru loop and pull tight (Figure 1).

c. Pass free end loop of connecting line around apex suspension lines of the 5 ft. drogue and thru anti-squid line. Route complete controller drogue thru loop of connecting line and pull tight (Figure 1).



6.2-5899

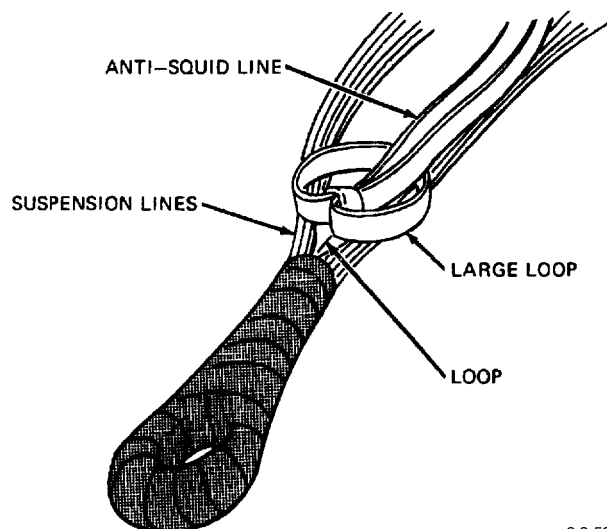
Figure 1. Replacement of Connecting Line

d. Tack connecting line at stabilizer drogue apex with one turn of size 6 thread, doubled and waxed; tie off.

e. Mark date placed in service on connecting line. (QA)

f. Inspect replacement anti-squid line per WP 018 02.

g. To replace anti-squid line, pass large loop end thru loop inside drogue suspension line union. Pass small loop end of anti-squid line thru large loop and pull tight to form a knot (Figure 2).



6.2-5909

Figure 2. Replacement of Anti-Squid Line

4. REPLACEMENT OF STABILIZER DROGUE.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Remove extender strap and shackle from stabilizer drogue, and retain for reinstallation Paragraph 7.

b. Remove connecting line tacking.

c. Route complete controller drogue thru loop of connecting line at apex of stabilizer drogue.

d. Dispose of stabilizer drogue per current supply directives.

e. Inspect replacement stabilizer drogue per WP 018 02.

f. Pass free end loop of connecting line around apex suspension lines of replacement stabilizer drogue and thru anti-squid line. Route complete controller drogue thru loop of connecting line and pull tight.

g. Tack connecting line at apex with one turn of size 6 thread, doubled and waxed; tie off.

h. Mark date placed in service on stabilizer drogue. Make proper entries on Parachute Record (OPNAV 4790/101). (QA)

i. Reinstall extender strap and shackle per Paragraph 7.

5. REPLACEMENT OF CONTROLLER DROGUE.

a. Cut withdrawal line tacking at apex of controller drogue and remove withdrawal line.

b. Route controller drogue thru loop of controller drogue.

c. Remove connecting line from loop of controller drogue.

d. Dispose of controller drogue per current supply directives.

e. Inspect replacement controller drogue per WP 018 02.

f. Pass one looped end of connecting line thru base loop of replacement controller drogue (Figure 1). Route end of line thru loop and pull tight.

g. Pass free end loop of connecting line around apex suspension lines of stabilizer drogue and thru anti-squid line (Figure 2). Route complete controller drogue thru loop of connecting line and pull tight.

h. Reinstall controller drogue withdrawal line per Paragraph 6.

i. Mark date placed in service on controller drogue. (QA)

6. REPLACEMENT OF DROGUE WITHDRAWAL LINE.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size FF, Type I or II, Class A

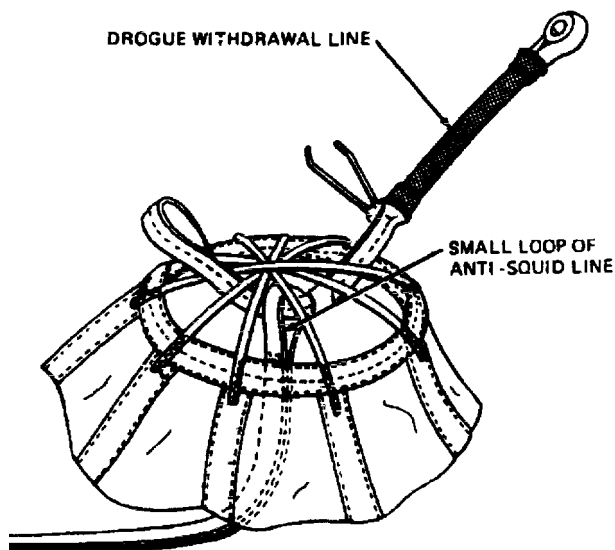
NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Inspect drogue withdrawal line per WP 018 02.

b. Replace drogue withdrawal line as described below.

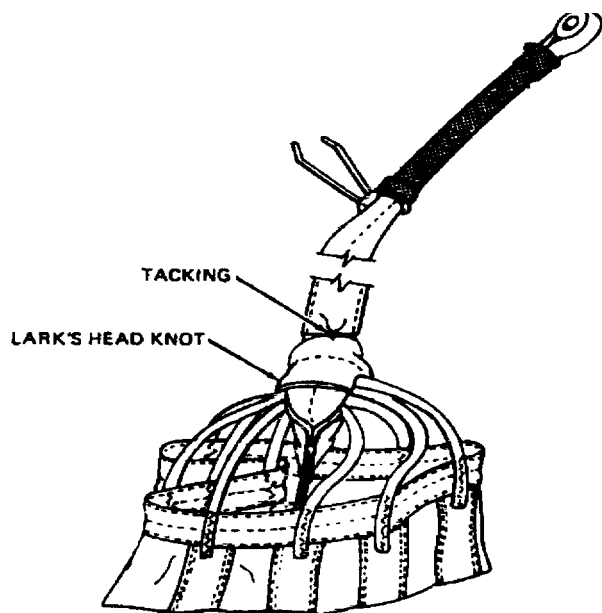
c. Hold five controller drogue apex lines centrally to form two clear diametrically opposite openings. Pass loop end of drogue withdrawal line in one side of centrally held apex lines, thru small loop of anti-squid line and out other side of apex lines (Figure 3).



6.2-5910A

Figure 3. Form Two Clear Diametrically Opposite Openings

d. Pass spool end of withdrawal line over outside of apex lines and thru loop at opposite end of withdrawal line. Pull tight to form lark's head knot. Tack with three turns of size FF thread, single; tie off (Figure 4).



6.2-5910B

Figure 4. Form a Lark's Head Knot

e. Mark date placed in service on drogue withdrawal line. Make proper entries on Parachute Record (OPNAV 4790/101). (QA)

7. REPLACEMENT OF STABILIZER DROGUE EXTENDER STRAP AND SHACKLE.

Materials Required

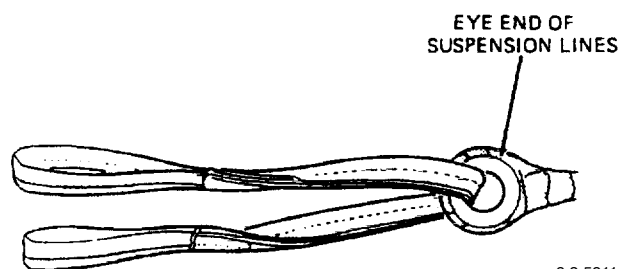
Specification or
Part Number

Nomenclature

MIL-I-19166

Tape, Electrical,
Insulation, 3/4-in. Wide

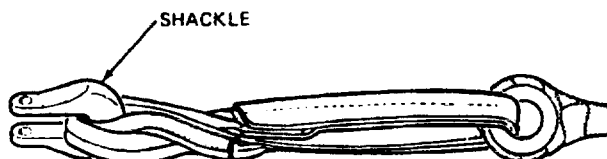
- Inspect extender strap and shackle per WP 018 02.
- Replace extender strap and shackle as described below.
- Pass extender strap thru eye end of main drogue suspension lines (Figure 5).



6.2-5911A

Figure 5. Pass Extender Strap thru Eye

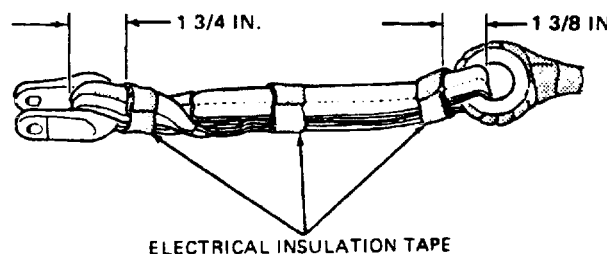
- Position end loops of straps on shackle (Figure 6).



6.2-5911B

Figure 6. Position End Loops

- Wrap with four turns of 3/4-in. wide electrical insulation tape in three places as shown (Figure 7).



6.2-5911C

Figure 7. Wrap With Four Turns of Tape

- Mark date placed in service on extender strap. Make proper entries on Parachute Record (OPNAV 4790/101). (QA)

8. CANOPY ASSEMBLY REPAIRS.

a. Repair of the canopy, suspension lines, steering line release lanyards and connector links is limited to the following:

(1) Do not repair holes 1-in. or less, mark location on canopy damage chart.

(2) Repair of any canopy hole or tear larger than 1-in. and less than 8-in. long with a double patch.

(3) Cleaning of contaminated areas.

(4) Repair of suspension lines and steering line release lanyards is limited to criteria standards per WP 004 00.

(5) Removal of dips and twists.

(6) Removal and reinstallation of suspension lines for proper sequencing.

b. Replace canopy assembly for any of the following:

(1) One or more complete gores are torn.

(2) Holes or tears 8-in. in length in one or more sections.

(3) Any one canopy section requires more than two double patches.

(4) Damaged suspension lines per WP 004 00.

(5) Service/total life has expired per WP 018 02.

c. Replace connector links for any of the following: Corrosion, distortion, bends, nicks, burrs, sharp edges, dents, breaks, broken rivet, defective tensioner and any damage that may affect the safe operation of the parachute assembly.

9. REPLACEMENT OF CONNECTOR LINK.

Support Equipment Required

Part Number	Nomenclature
Refer to WP 005 00	Temporary Locking Pin
MBEU68053	Tensioner Locking Key

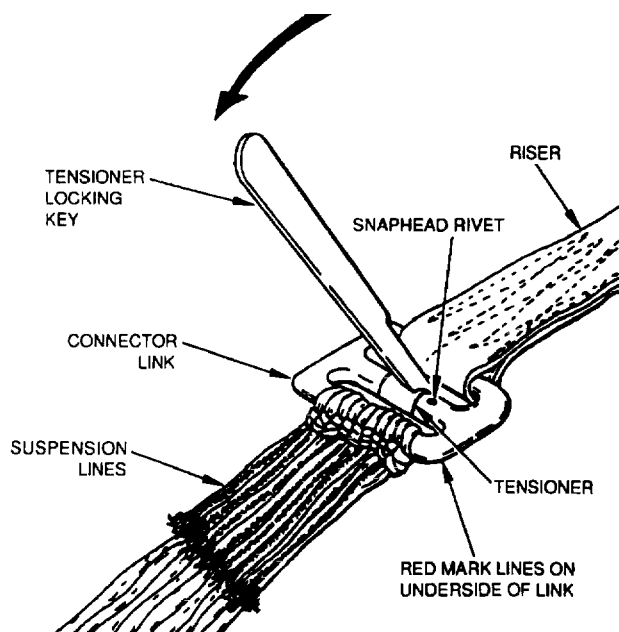
Materials Required

Specification or Part Number	Nomenclature
MS20470B2-8	Rivet, Universal Head, 0.0625-in. Diameter

a. Inspect replacement connector link for proper part number, corrosion, distortion, bends, dents, nicks, burrs, sharp edges, broken rivet and defective tensioner

b. Remove rivet from damaged connector link.

c. Using tensioner locking key, turn tensioner to allow separation and rotation of both halves of connector link (Figure 8).



6.2-5914

Figure 8. Connector Link Removal

d. Slide suspension links off link and onto a temporary holder.

e. Remove connector link from riser and scrap.

f. Position riser on new connector link.

g. Slide suspension lines onto new connector link.

h. Ensure that suspension lines are free from twists and reengage connector link.

i. Tighten tensioner using tensioner locking key, align red lines on connector link and tensioner, and install new 0.0625-in. diameter rivet. Peen rivet (Figure 8). (QA)

j. Check suspension line continuity (Figure 9).

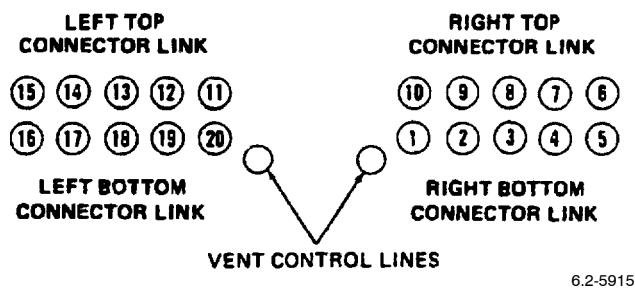


Figure 9. Arrangement and Orientation of Suspension Lines on Connector Links

10. REPLACEMENT OF CANOPY ASSEMBLY.

Support Equipment Required

Part Number	Nomenclature
-------------	--------------

MBEU68053	Tensioner Locking Key
-----------	-----------------------

Materials Required

Specification or Part Number	Nomenclature
------------------------------	--------------

MS20470B2-8	Rivet, Universal Head 0.0625-in. Diameter
-------------	--

a. Remove shackle sleeve from parachute withdrawal line at crown bridle loop per Paragraph 17.

b. Remove shackle securing parachute withdrawal line to crown bridle loop.

NOTE

Connector links shall be disengaged one at a time.

c. Remove rivet from connector link.

CAUTION

Do not separate tensioner from connector link completely.

CAUTION

Arrangement of suspension lines on connector links shall not be changed and loops on ends of suspension lines shall not be pulled apart during handling.

d. Using tensioner locking key, turn tensioner to allow separation and rotation of both halves of connector link (Figure 8).

e. Remove steering lines from risers and canopy.

f. Remove suspension lines and vent control lines from connector links.

g. Dispose of canopy assembly per current supply directives.

h. Lay out replacement canopy assembly full length on clean packing table.

i. Attach tension strap hook to canopy vent lines.

j. Locate gore number 1 (nameplate) and place bottom-most in center of packing table.

k. At skirt hem, separate suspension lines into two equal groups with lines 11 thru 20 on packer's side and lines 1 thru 10 on helper's side.

l. Install suspension lines and vent control lines per Figure 9.

m. Grasping each group of lines, walk from skirt hem to connector links removing any dips and twists between two groups.

n. Place connector link with lines 11 thru 15 on top of connector link with lines 16 thru 20. Place connector link with lines 6 thru 10 on top of connector link with lines 1 thru 5. Insert tension hooks into connector links and into packing table. Ensure that steering lines are attached to suspension lines 4 and 17.

o. Pull suspension lines taut and adjust vent hem.

p. Check suspension line continuity on left side of gore 10. Packer shall grasp line 11 at skirt hem and raise to enough height to ensure line is free of dips and twists. Continue procedure with lines 12 thru 20 (Figure 9). Helper shall be positioned at connector links to check lines selected by packer.

q. Check suspension line continuity on right side of gore 10. Packer shall grasp line 10 at skirt hem and raise to enough height to ensure line is free of dips and twists. Continue procedure with lines 9 thru 1 (Figure 9). Helper shall be positioned at connector links to check lines selected by the packer. Ensure that vent control lines are connected at inboard end of connector links adjacent to lines number 1 and 20. (QA)

r. Continue to inspect canopy assembly per WP 018 02.

s. Tighten tensioner using tensioner locking key, align red lines on connector link and tensioner, and install new 0.0625-in. diameter rivet. Peen rivet (Figure 8). (QA)

t. Repeat step s for each connector link.

u. Mark date placed in service on canopy assembly, per WP 004 00. Make proper entries on Parachute Record (OPNAV 4790/101). (QA)

v. Reattach steering line to risers and canopy.

w. Reattach parachute withdrawal line to crown bridle loop, and replace shackle sleeve per Paragraph 15.

11. REMOVAL AND REINSTALLATION OF SUSPENSION LINES FOR PROPER SEQUENCING.

Support Equipment Required

Part Number	Nomenclature
MBEU68053	Tensioner Locking Key

Materials Required

Specification or Part Number	Nomenclature
MS20470B2-8	Rivet, Universal Head 0.0625-in. Diameter

a. Remove rivet from connector link.

b. Using tensioner locking key, turn tensioner to allow separation and rotation of both halves of connector link (Figure 8).

CAUTION

Ensure clove-hitch and half-hitch at ends of suspension lines do not separate during handling.

c. Slide suspension lines off link and onto a temporary holder.

d. Sequence lines on connector link bar per Figure 9.

e. Ensure that suspension lines are free from twists and then reengage connector link.

f. Check suspension line continuity (Figure 9).

g. Tighten tensioner using tensioner locking key, align red lines on connector link and tensioner and install new 0.0625-in. diameter rivet. Peen rivet (Figure 8). (QA)

12. PARACHUTE WITHDRAWAL LINE REPAIRS.

13. GENERAL.

a. Repair of parachute withdrawal line is limited to replacement of parachute withdrawal line.

14. REPLACEMENT OF PARACHUTE WITHDRAWAL LINE.

a. Remove stitches securing shackle sleeve to parachute withdrawal line and crown bridle loop.

b. Remove nuts and bolts securing drogue and parachute shackles to parachute withdrawal line. Remove and scrap damaged parachute withdrawal line. Scrap shackle nuts.

c. Position new parachute withdrawal line between arms of shackle. Insert bolt in shackle, passing thru loop of withdrawal line. Secure bolt with new shackle nut.

d. Position opposite end loop of parachute withdrawal line between arms of drogue shackle. Insert bolt in shackle, passing thru loop of parachute withdrawal line. Secure bolt with new nut.

e. Replace shackle sleeve per Paragraph 15.

15. SHACKLE SLEEVE REPAIRS.

16. GENERAL.

a. Replace the shackle sleeve when any of the following conditions exist: contamination, deterioration, or rupture.

17. REPLACEMENT OF SHACKLE SLEEVE.

Materials Required

Specification or Part Number	Nomenclature
MIL-C-5646	Cloth, Cotton, Type A
V-T-295	Thread, Nylon, Size E, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Remove stitches securing shackle sleeve to parachute withdrawal line and crown bridle loop.

b. Ensure that crown bridle loop and withdrawal line are securely attached to parachute shackle.

c. Cut out a new 9 x 5-in. shackle sleeve and replace shackle sleeve.

d. Place shackle sleeve on packing table and position shackle centrally (Figure 10).

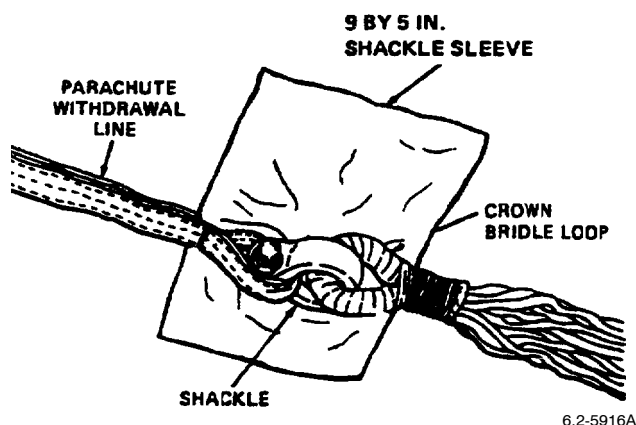


Figure 10. Place Shackle Sleeve on Packing Table

e. Fold one end of sleeve over shackle and tuck edge of sleeve under shackle (Figure 11).

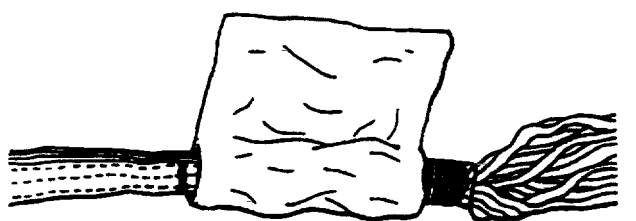


Figure 11. Fold One End of Sleeve Over Shackle

f. Fold other end of sleeve over and turn edge under 1/2-in. Handstitch length of sleeve using size E thread (Figure 12).

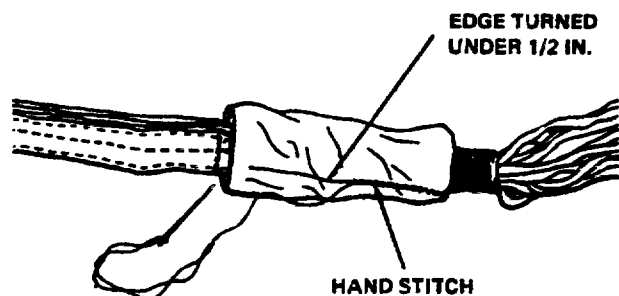


Figure 12. Fold Other End of Sleeve Over

g. Secure shackle sleeve into position by tacking open ends of stitched sleeve with one turn of size E thread, single and waxed; tie off. Tack in four places, two at each end of sleeve (Figure 13).



Figure 13. Secure Shackle Sleeve

18. RISER ASSEMBLY REPAIRS.

a. Repair of the riser assembly is limited to the following:

- (1) Cleaning of contaminated areas.
- (2) Removal and replacement of riser assembly.
- (3) Removal and replacement of cross connector strap
- (4) Replacement of steering lanyard pull loop tackings.

b. Replace the riser assembly for any of the following:

- (1) Cuts, tears, or holes.
- (2) Loose or broken stitching excess of 3 stitches.
- (3) Twists, fading wear, fusing, fraying, burns, contamination, or abrasion.

19. REPLACEMENT OF RISER ASSEMBLY.

Support Equipment Required

Part Number	Nomenclature
MBEU68053	Tensioner Locking Key
MS20470B2-8	Rivet, Universal Head 0.0625-in. Diameter

- a. Remove steering lines from riser.

NOTE

Connector links shall be disengaged one at a time.

- b. Remove rivet from connector link.

CAUTION

Do not separate tensioner from connector link completely.

Arrangement of suspension lines on connector links shall not be changed and loops on ends of suspension lines shall not be pulled apart during handling.

- c. Using tensioner locking key, turn tensioner to allow separation and rotation of both halves of connector link (Figure 8).

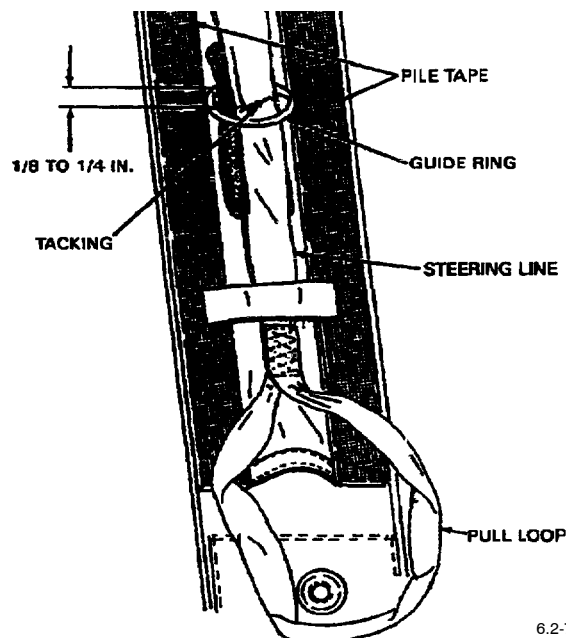
- d. Remove damaged riser and slide corresponding new riser onto connector link.

- e. Tighten tensioner using tensioner locking key, align red lines on connector link and tensioner and install new 0.0625-in. diameter rivet. Peen rivet (Figure 8). (QA)

- f. Repeat steps c thru e for each connector link. Scrap damaged riser assembly.

- g. Check suspension line continuity (Figure 9).

- h. Install steering lines on riser (Figure 14).



6.2-7229A

Figure 14. Steering Line Release Lanyard Pull Loop Tacking

20. FABRICATION OF RISER COVER (RIGHT SIDE).

Support Equipment Required

Part Number	Nomenclature
—	Hot Knife
—	Shears
—	Square

Materials Required

Specification or Part Number	Nomenclature
MIL-C-7219	Cloth, Duck, Nylon, Type III, Class 1, Sage Green
MIL-F-21840	Fastener Tape, Hook, 5/8-in. Wide, Type II, Class 1, Sage Green
MIL-F-21840	Fastener Tape, Pile, 5/8-in. Wide, Type II, Class 1, Sage Green
V-T-295	Thread, Nylon, Size E, Type I or II, Class A, Sage Green

NOTE

If several riser covers are to be manufactured, it is recommended that a flat pattern (template) be fabricated to ensure consistency.

a. Lay out a 42 1/4 x 5-in. piece of nylon cloth (Figure 15).

NOTE

During Fabrication, the left side refers to the shorter end of the riser cover.

b. On the bottom left side, measure and mark in 4 3/8-in. Repeat procedure on the top line.

c. Using square and starting on the bottom line, at the 4 3/8-in. mark, measure and draw line up 3/8-in.

d. Using square, on the top line, at the 4 3/8-in. mark, measure and draw line down 3/8-in.

e. On the bottom right side, measure and mark in 11 3/8-in. Repeat procedure on the top line.

f. Using square and starting on the bottom line, at the 11 3/8-in. mark, measure and draw line up 3/8-in.

g. Using square, on the top line, at the 11 3/8-in. mark, measure and draw line down 3/8-in.

h. Using straight edge, connect the top 3/8-in. marks.

i. Using straight edge, connect the bottom 3/8-in. marks.

j. Using hot knife and straight edge, sear cut on lines measured and drawn in steps a, h and i.

k. At the 4 3/8-in. mark, sear cut a slit an additional 3/8-in. down from top and up from bottom. This is to allow the outside edges to be folded.

l. At the 11 3/8-in. mark, sear cut a slit an additional 3/8-in. down from top and up from bottom. This is to allow the outside edges to be folded.

m. Fold all edges over 3/8-in. and sew 1/16-in. from seared edge.

n. Cut 1 piece of 5/8-in. hook fastener tape 2-in. long. With folded side up, center hook fastener tape on left edge. Sew in place with a box stitch.

o. Cut two pieces of 5/8-in. hook fastener tape 26-in. long. With folded side up, starting at either 3/8-in. slit, place fastener tape 1/16-in. from top edge and sew in place with a box stitch. Box stitch should be 1/16-in. inboard of fastener tape.

p. Repeat step o for bottom edge.

q. Cut two pieces of 5/8-in. pile fastener tape 26-in. long. With folded side down, starting at the 3/8-in. slit, place fastener tape 1/16-in. from top edge and sew in place with a box stitch. Box stitch should be 1/16-in. inboard of fastener tape.

r. Repeat step q for bottom edge.

s. Cut a 4-in. piece of pile fastener tape. Place fastener tape 1/16-in. from top left edge and sew in place with "E" thread. Box stitch should be 1/16-in. inboard of fastener tape.

t. Cut a 4-in. piece of hook fastener tape. Place the top edge of fastener tape, hook side facing fold, 1/8-in. from bottom left edge. Sew in place with single stitch, backstitch 1/2-in. each end.

u. Cut a 11-in. piece of pile fastener tape. Place fastener tape 1/16-in. from top left edge and sew in place with "E" thread. Box stitch should be 1/16-in. inboard of fastener tape.

v. Cut a 11-in. piece of hook fastener tape. Place the top edge of fastener tape, hook side facing fold, 1/18-in. from bottom left edge. Sew in place with single stitch. Backstitch 1/2-in. each end.

21. FABRICATION OF RISER COVER (LEFT SIDE).

Support Equipment Required

Part Number	Nomenclature
—	Hot Knife
—	Shears
—	Square

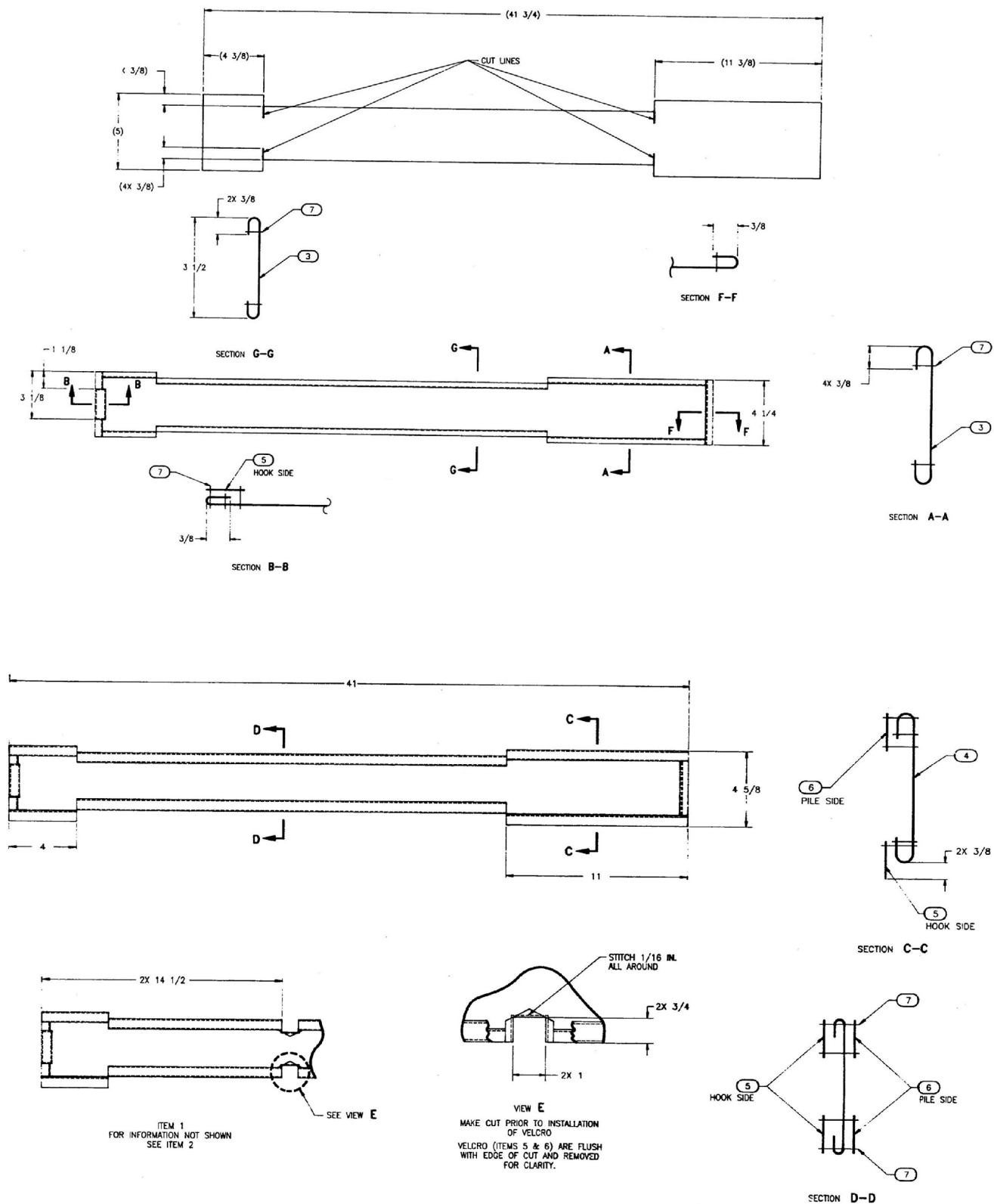


Figure 15. Riser Cover Fabrication

Materials Required

Specification or Part Number	Nomenclature
MIL-C-7219	Cloth, Duck, Nylon, Type III, Class 1, Sage Green
MIL-F-21840	Fastener Tape, Hook, 5/8-in. Wide, Type II, Class 1, Sage Green
MIL-F-21840	Fastener Tape, Pile, 5/8-in. Wide, Type II, Class 1, Sage Green
V-T-295	Thread, Nylon, Size E, Type I or II, Class A, Sage Green

NOTE

If several riser covers are to be manufactured, it is recommended that a flat pattern (template) be fabricated to ensure consistency.

a. Lay out a 42 1/4 x 5-in. piece of nylon cloth (Figure 15).

NOTE

During Fabrication, the left side refers to the shorter end of the riser cover.

b. On the bottom left side, measure and mark in 4 3/8-in. Repeat procedure on the top line.

c. Using square and starting on the bottom line, at the 4 3/8-in. mark, measure and draw line up 3/8-in.

d. Using square, on the top line, at the 4 3/8-in. mark, measure and draw line down 3/8-in.

e. On the bottom right side, measure and mark in 11 3/8-in. Repeat procedure on the top line.

f. Using square and starting on the bottom line, at the 11 3/8-in. mark, measure and draw line up 3/8-in.

g. Using square, on the top line, at the 11 3/8-in. mark, measure and draw line down 3/8-in.

h. Using straight edge, connect the top 3/8-in. marks.

i. Using straight edge, connect the bottom 3/8-in. marks.

j. Using hot knife and straight edge, sear cut on lines measured and drawn in steps a, h and i.

k. At the 4 3/8-in. mark, sear cut a slit an additional 3/8-in. down from top and up from bottom. This is to allow the outside edges to be folded.

l. At the 11 3/8-in. mark, sear cut a slit an additional 3/8-in. down from top and up from bottom. This is to allow the outside edges to be folded.

m. Fold all edges over 3/8-in. and sew 1/16-in. from seared edge.

n. From the left side bottom, measure in 14 1/2-in. and mark.

o. From the 14 1/2-in. mark, lay out a 1-in. wide x 3/4-in. high cutout.

p. Using a hot knife, inside the 1-in. x 3/4-in., cut out a 3/8-in. x 3/8-in. piece of material.

q. From the corner of the cutout, using hot knife, sear cut a slit, approximately 45 degrees, from the 3/8-in. corner of the seared edge to the inside of the drawn corner. Repeat on other corner. This is done to allow for folding and to achieve the finished dimension of 1-in. x 3/4-in.

r. Repeat steps n through q for the top.

s. Cut 1 piece of 5/8-in. hook fastener tape 2-in. long. With folded side up, center hook fastener tape on left edge. Sew in place with a box stitch.

t. Cut two pieces of 5/8-in. hook fastener tape 26-in. long. With folded side up, starting at either 3/8-in. slit, place fastener tape 1/16-in. from top edge and sew in place with a box stitch. Box stitch should be 1/16-in. inboard of fastener tape.

u. Repeat step t for bottom edge.

v. Cut two pieces of 5/8-in. pile fastener tape 26-in. long. With folded side down, starting at the 3/8-in. slit, place fastener tape 1/16-in. from top edge and sew in place with a box stitch. Box stitch should be 1/16-in. inboard of fastener tape.

w. Repeat step v for bottom edge.

x. Cut a 4-in. piece of pile fastener tape. Place fastener tape 1/16-in. from top left edge and sew in place with "E" thread. Box stitch should be 1/16-in. inboard of fastener tape.

y. Cut a 4-in. piece of hook fastener tape. Place the top edge of fastener tape, hook side facing fold, 1/8-in. from bottom left edge. Sew in place with single stitch, backstitch 1/2-in. each end.

z. Cut a 11-in. piece of pile fastener tape. Place fastener tape 1/16-in. from top left edge and sew in place with "E" thread. Box stitch should be 1/16-in. inboard of fastener tape.

aa. Cut a 11-in. piece of hook fastener tape. Place the top edge of fastener tape, hook side facing fold, 1/18-in. from bottom left edge. Sew in place with single stitch. Backstitch 1/2-in. each end.

22. REPLACEMENT OF CROSS-CONNECTOR STRAP.

Support Equipment Required

Part Number	Nomenclature
MBEU68053	Tensioner Locking Key
MS20470B2-8	Rivet, Universal Head, 0.0625-in. Diameter

NOTE

Connector lines shall be disengaged one at a time.

- Remove steering lines from risers.
- Remove snaphead rivet from connector link.

CAUTION

Do not separate tensioner from connector link completely.

c. Using tensioner locking key, turn tensioner to allow separation and rotation of both halves of connector link (Figure 8).

d. Remove damaged cross-connector strap from connector link. Position new cross-connector strap on connector link.

e. Ensure that suspension lines are free from twists and reengage connector link.

f. Tighten tensioner using tensioner locking key, align red lines on connector link and tensioner and install new 0.0625-in. diameter snaphead rivet. Peen rivet (Figure 8). (QA)

g. Repeat steps a thru f for each connector link.

h. Check suspension line continuity (Figure 9).

23. REPLACEMENT OF STEERING LINE RELEASE LANYARD PULL LOOP TACKING.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size A, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

- Fully extend pull loop and position between risers.
- Tack at center line of riser 1/8 to 1/4-in. below guide ring with one turn of size A thread, single and waxed; tie off (Figure 14).

24. REPLACEMENT OF LOWER STEERING LINE.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size A, Type I or II, Class A
V-T-295	Thread, Nylon, Size E, Type I or II, Class A
MIL-F-21840	Fastener Tape, Hook Type II, Class I 1/4-in., Sage Green

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

- Separate the front and rear riser hook and pile fasteners and snap fasteners.
- Measure 6-in. from end of cord and mark. Fold back on mark, forming a handle and stitch for 1-in. (Figure 16).

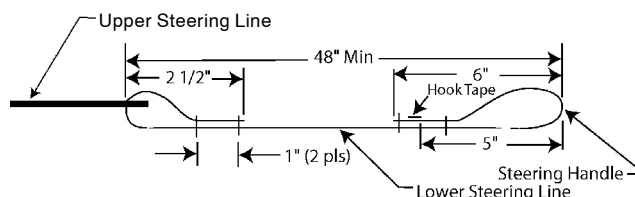


Figure 16. Fabrication of Lower Steering Line

- c. Measure from end of handle 5-in. and mark.
- d. Attach 1 1/2-in. x 1/2-in. hook fastener tape with 3 rows of "E" thread.
- e. Cautiously, remove the stitching from the lower steering line loop.
- f. Remove the tacking securing the lower steering line to the riser below the guide ring. Discard the removed steering line.
- g. On the replacement lower steering line, measure 2 1/2-in. from end, and mark.
- h. Route marked free end thru the upper steering line loop. Fold on mark and sew per WP 004 00 (Figure 16). (QA)
- i. Pass the hand steering line loop thru the guide ring. Ensure that the steering line is not twisted. Place the hand steering loop around the snap fastener, and secure riser snap fastener.
- j. Tack the steering line to the riser below the guide ring with one turn of size A thread, single and waxed; tie off.
- k. Center the steering line between the hook and pile fasteners, then secure the risers. (QA)

25. FABRICATION OF LOWER STEERING LINE.

Materials Required

Specification or Part Number	Nomenclature
MIL-C-5040	Cord, Nylon, Type III
V-T-295	Thread, Nylon, Size E, Type I or II, Class A

NOTE

For all stitching use either Type 301 Lock stitch, two rows, size E nylon thread, or Type 304, single-throw zigzag, or 308 double-throw, zigzag, one row, size E nylon thread. Backstitch 1/2-in.

- a. Cut a 56 3/4-in. length of Type III nylon cord. Remove inner core. Sear ends.
- b. Measure 6 inches from end of cord and mark. Fold back on mark and stitch for 1-in. (Figure 16).

- c. On the opposite end of cord, measure 2 1/2-in. and mark (Figure 16).

- d. Route the marked free end thru the upper steering line loop. Fold to mark and stitch for 1-in.

- e. Finished length should not exceed 50 3/4-in. (Figure 16).

26. CONTAINER ASSEMBLY REPAIRS.

- a. Repair of container assembly is limited to the following:

- (1) Replacement of Corner Tackings.
- (2) Replacement of Headpad.
- (3) Replacement of Pressure Sensitive Tape Over Internal Assembly.
- (4) Replacement of Grommets on Flap Assembly.
- (5) Replacement of Outer Flap Assemblies.
- (6) Replacement of Protection Flap.
- (7) Replacement of Inner Flaps.
- (8) Repair of Inner Flaps Broken Stitching.
- (9) Repair of Interior Painted Surfaces.
- (10) Replacement of Labels and Decals.
- (11) Replacement of Riser Hook Fastener Tape.

27. REPLACEMENT OF CORNER TACKINGS.

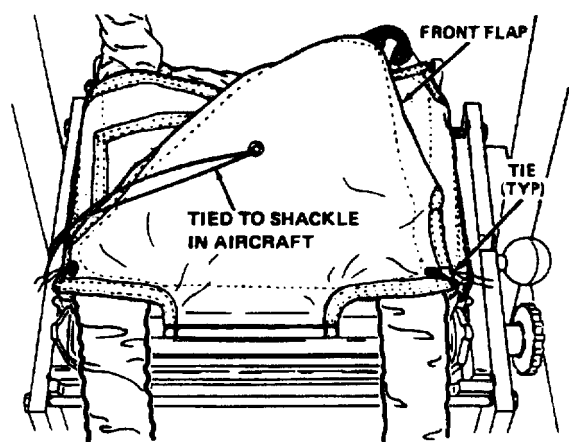
Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size FF, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

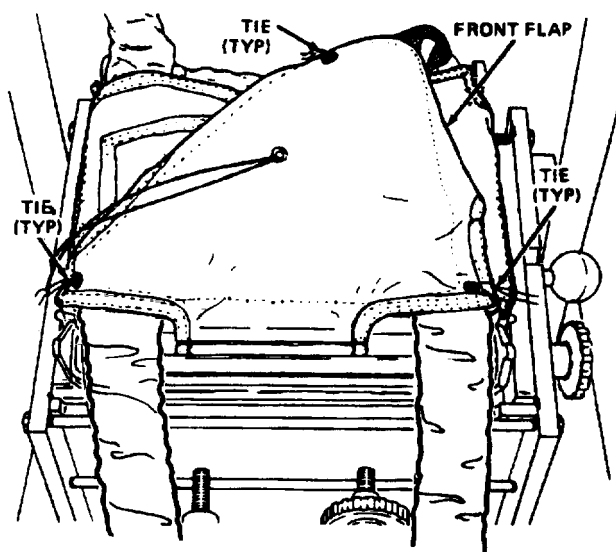
- a. Remove broken or loose tacking.
- b. Pass a length size FF thread, single and waxed, thru grommets on front and corner flaps; tie off (Figure 17).



6.2-6124A

Figure 17. Pass a Length of Thread thru Grommets on Flaps

c. (Parachute assembly with outer front flap P/N MBEU69955). Tie down corners of front flap and center aft end of flap with size FF thread, single and waxed. Pass thread thru grommets on flaps and then thru loop on lower flap; tie off (Figure 18).



6.2-6124B

Figure 18. Tie Down Corners

28. REPLACEMENT OF HEADPAD.

- Remove four mushroom headbolts and retain.
- Remove damaged headpad.
- Inspect replacement headpad per WP 018 02.

d. Position new headpad on container.

e. Reinstall four mushroom head bolts. Torque to 25 in-lbs. (QA)

29. CONTAINER ASSEMBLY REPLACEMENT OF PRESSURE SENSITIVE TAPE OVER INTERNAL STRIP ASSEMBLY.

Materials Required

Specification or
Part Number

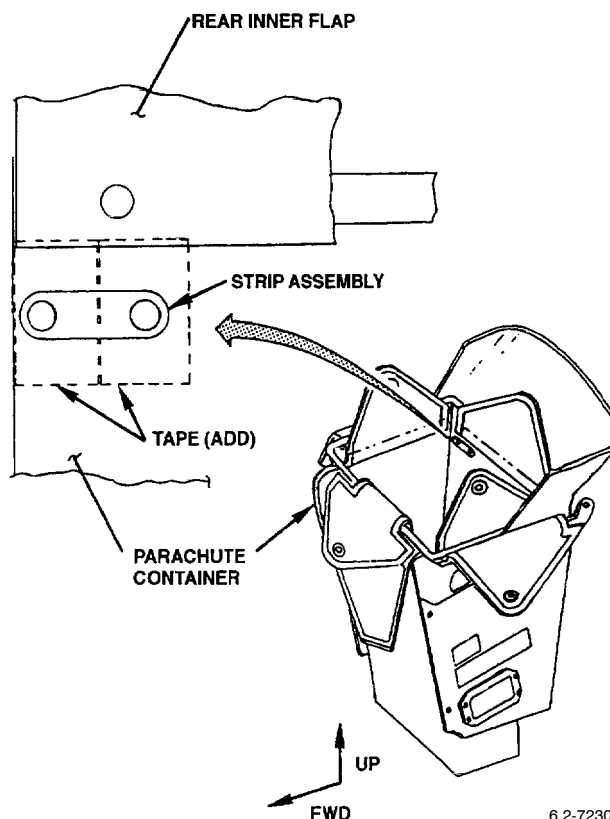
Nomenclature

MIL-I-19166

Tape, Electrical,
3/4-in. Wide

a. Cut two strips of tape 1 1/2-in.

b. Apply tape vertical over the strip assembly located below the rear inner flap assembly, right side of the parachute container. Position upper ends of tape as far under the inner flap edge as possible. Apply the tape vertical, side-by-side, centered over the strip assembly. Ensure that the ends of the tapes have adhered to the container surface so as to avoid peeling during parachute packing (Figure 19).



6.2-7230

Figure 19. Replacement of Tape

30. REPLACEMENT OF GROMMETS ON FLAP ASSEMBLY.

Materials Required

Specification or
Part Number

Nomenclature

MIL-C-7219

Cloth, Nylon

V-T-295

Thread, Nylon,
Size E, Type I or II,
Class A

MS20230-GB20

Grommet, Metallic

MS20230-WB20

Washer, Metallic

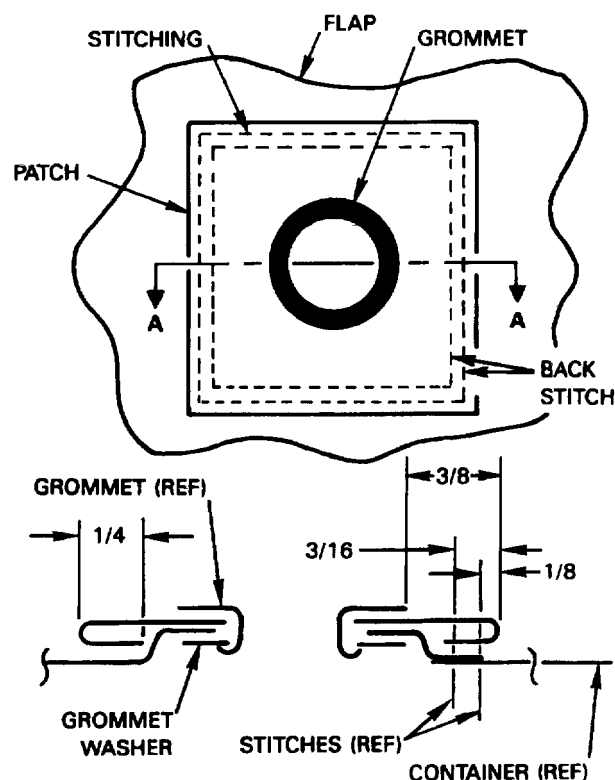
a. Cover hole on flap assembly with square patch. Cut a 1 1/4-in. square patch, turn raw edges under 1/4-in. Stitch patch on all four sides with two rows of stitching per WP 004 00, using size E thread. Backstitch 1/2-in. (Figure 20).

b. Cut a 5/32-in. diameter hole in center of patch.

c. Place grommet washer on underside of flap. Place grommet on topside of patch.

d. Lock grommet and grommet washer in place with correct size chuck and die (Figure 20).

e. If crimped edge of grommet has any sharp edges, remove two rows of stitches around patch and repeat steps a thru d.



6.2-7297

Figure 20. Replacement of Grommets

31. REPLACEMENT OF OUTER FLAP ASSEMBLIES.

Materials Required

Specification or
Part Number

Nomenclature

NAS1291-C08M

Locknut

a. Port or Starboard Flap:

(1) Remove locknuts with flat washers and bolts with nuts securing canopy breaker, side drogue flap inner strip, and penetrator backing strip to container. Scrap locknuts.

(2) Remove bolt securing canopy breaker to crossbar.

(3) Remove canopy breaker to remove flap. Scrap damaged flap.

(4) Mark position of bolts on new flap from side drogue flap inner strip. Punch four 3/16-in. diameter holes; seal holes with hot iron.

(5) Position new flap on container. Assemble canopy breaker on container. Secure with flat washers and locknuts, torque locknuts to 25 in-lbs. Torque the two bolts with nuts to 115 in-lbs; torque the bolt securing canopy breaker to crossbar to 50 in-lbs.

b. Rear Flap:

(1) Remove locknuts with flat washers securing rear top flap securing strip and rear drogue flap inner strip to container. Scrap locknuts.

(2) Remove rear top flap securing strip to remove flap. Scrap damaged flap.

(3) Mark position of bolts on new flap from rear drogue flap inner strip. Punch four 3/16-in. diameter holes; seal holes with hot iron.

(4) Position new flap on container. Assemble rear outer flap securing strip to container. Secure with washers and locknuts. Torque locknuts to 25 in-lbs.

c. Front Flap:

(1) Remove bolts securing canopy breakers to crossbar.

NOTE

The front flap is held between the crossbar and surround tube on the container.

(2) Remove crossbar to remove front flap. Scrap damaged flap.

(3) Position new flap on container. Assemble crossbar on container. Secure canopy breakers to crossbar with the bolts. Torque bolts to 50 in-lbs.

d. Close flaps to make sure closure pin loop on rear flap passes easily thru grommets of outer flaps. Flaps shall overlap when secured by closure pin loop.

e. Remove closure pin loop on rear flap if damaged. Closure pin loop is removed and replaced thru an access hole on inside of rear flap. The access hole is closed by a flap with hook and pile tape.

32. REPLACEMENT OF PROTECTION FLAP.**Materials Required**

Specification or Part Number	Nomenclature
NAS1291-C08M	Locknut

a. Remove locknuts with flat washers and bolts with nuts securing canopy breaker, inner side drogue flap strip and penetrator backing strip on both the port and starboard sides of container. Scrap locknuts.

b. Remove bolts securing canopy breakers to crossbar.

c. Remove canopy breakers, starboard flap, and port flap from container.

d. Remove locknuts with flat washers securing rear top flap securing strip and rear drogue flap inner strip to container. Scrap locknuts.

e. Remove rear top flap securing strip, rear flap and protection flap from container. Scrap damaged protection flap.

f. Position new protection flap and rear flap on container. Secure strip on container with flat washers and locknuts. Torque locknuts to 25 in-lbs. (QA)

g. Position protection flap and starboard flap on container. Secure breaker on container with flat washers and locknuts. Install bolts on container with nuts. Torque the bolts with nuts to 115 in-lbs; torque bolts securing canopy breaker to crossbar to 50 in-lbs. (QA)

h. Repeat step g on port side of container.

33. REPLACEMENT OF INNER FLAPS.**Materials Required**

Specification or Part Number	Nomenclature
NAS1291-C08M	Locknut

a. Port or Starboard Flap:

(1) Remove locknuts and flat washers securing flap to container. Scrap locknuts and damaged flap.

(2) Position new flap on container and secure with washers and new locknuts.

b. Rear Flap:

(1) Remove locknuts and flat washers securing starboard flap to container. Remove starboard flap and keep for reassembly. Scrap locknuts.

(2) Remove locknuts securing mechanical lock housing and rear flap to container. Remove locknuts securing mechanical lock housing and mechanical lock backing strip to container. Remove and keep mechanical lock housing for reassembly. Scrap locknuts.

(3) Remove locknuts and flat washers securing rear flap to container. Scrap locknuts and damaged rear flap.

(4) Position new rear flap on container. Secure with flat washers and new locknuts.

(5) Position housing on container and secure with locknuts. Torque locknuts to 25 in-lbs.

(6) Position starboard flap on container and secure with washers and locknuts.

c. Front Flap:

(1) Remove headpad per Paragraph 28.

(2) Remove locknuts and flat washers securing front flap to container. Scrap locknuts and damaged flap.

(3) Position new front flap on container and secure with washers and locknuts.

(4) Replace headpad per Paragraph 28.

34. REPAIR OF INNER FLAPS BROKEN STITCHING.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size E, Type I or II, Class A
NAS1291-C08M	Locknut

a. Remove locknuts and flat washers securing the flap strip and flap to the container. Scrap locknuts.

b. Remove flap securing strip and flap.

c. Make the repair per WP 004 00. Backstitch no less than 1/2-in.

d. Position repaired flap on container, assemble flap securing strip to container. Secure with washers and locknuts. Torque to 25 in-lbs.

e. Close flaps to make sure closure pin loop on rear flap passes easily thru grommets of outer flaps. Flaps shall overlap when secured by closure pin loop.

f. Remove closure pin loop on rear flap if damaged. Closure pin loop is removed and replaced thru an access hole on inside of rear flap. The access hole is closed by a flap with hook and pile tape.

35. REPAIR OF INTERIOR PAINTED SURFACES.

Materials Required

Specification or Part Number	Nomenclature
CCC-C-440	Cheesecloth
TT-I-735	Isopropyl Alcohol
BEHR-TEX	Abrasive Material Type S
MIL-P-23377	Primer Coating, Epoxy, Class 2
MIL-T-81772	Thinner, Aliphatic
HB643	Brush, Non-Metallic
00311 Dry Film Vydax Sprayon Products (Open Purchase)	Release Agent

a. Inspect interior of container for any painted surfaces.

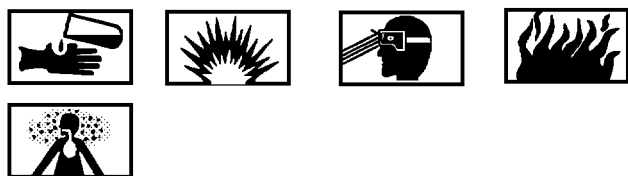
b. Wipe the painted surface of the container with cheesecloth, if the cloth snags or catches, even slightly, it must be polished.

c. Polish the painted surfaces with scotchbrite until the cheesecloth no longer catches or snags, take caution not to rub thru the paint to the bare metal.



Epoxy Primer, MIL-P-23377

5

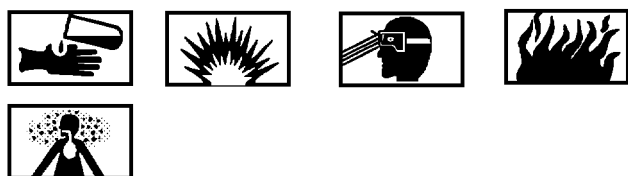


Aliphatic Thinner, MIL-T-81772

8

NOTE

If paint is removed to bare metal, refinish affected area with epoxy primer. Mix primer to following ratio: three parts base with one part during solution and one part solvent thinner. Apply one coat, with brush, over affected area. Allow a 20 min. air dry period. Then force dry for 10 to 15 min. at 200-250°F. Then repeat steps b and c if required.



Isopropyl Alcohol, TT-I-735

11

WARNING

Isopropyl alcohol is highly flammable.

CAUTION

Isopropyl alcohol can remove lubricants and preservatives and may soften plastics. Use only as directed.

d. After polishing, wipe clean with cheesecloth moistened with isopropyl alcohol. Wipe with clean dry cheesecloth before alcohol evaporates.

e. Prior to parachute packing and each subsequent packing, spray the entire interior painted surfaces, below the inner flaps with a thin coat of release compound agent. Spray with short bursts, assure no runs occur. Release compound dries instantly.

f. Prior to each repack the interior of the headbox shall be cleaned to remove any residual release agent from previous repacks. Wipe clean per step d.

36. REPLACEMENT OF LABELS AND DECALS.

a. Remove old labels and decals.

b. Install new labels and decals in proper locations on container.

37. REPLACEMENT OF RISER HOOK FASTENER TAPE.

Materials Required

Specification or Part Number	Nomenclature
MIL-F-21840	Fastener, Tape, Hook, 1 1/2-in. Wide, Type II, Class 1
O-A-51	Technical Acetone
MIL-A-5540	Adhesive (Polychloroprene)

a. Remove old hook fastener tape from sides of container.



Technical Acetone, O-A-51

1

b. Clean off area of container where new hook fastener tape is to be installed with technical acetone.

c. Cut two 3-in. pieces of hook fastener tape.

d. Apply adhesive to both sides of container and underside of hook tape.

e. Allow adhesive to become tacky and press hook tape firmly onto prepared areas on sides of container.

38. REPAIR OF DROGUE CANOPY HOLES, TEARS OR SNAGS.

Materials Required

Specification or
Part Number

Nomenclature

V-T-276

Thread, Cotton,
Size 30/3, Red
-or-

A-A-52094

Thread, Cotton,
Size 30/3, Red

a. If a thread separation is not severe and no threads are broken, threads can be pressed into place using a soft brush or a pencil eraser. If damaged area is brushed in wrong direction, separation will increase.

b. Darn holes or tears that do not exceed 1/2-in. in length or (1/4-in. x 1/4-in. if circular, a diameter of 5/16-in.).

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ORGANIZATIONAL, INTERMEDIATE, AND DEPOT MAINTENANCE

ILLUSTRATED PARTS BREAKDOWN

A/P28S-24 PERSONNEL PARACHUTE ASSEMBLY

PART NO. MBEU10030PA-4

List of Effective Work Package Pages

<u>Page No.</u>	<u>Chg. No.</u>	<u>Page No.</u>	<u>Chg. No.</u>	<u>Page No.</u>	<u>Chg. No.</u>	<u>Page No.</u>	<u>Chg. No.</u>
1	10	7	10	8	9	9	10
2 thru 6	9						

Reference Material

Intermediate and Depot Maintenance, Packing Procedures, A/P28S-24 Personnel Parachute Assembly WP 018 02

Alphabetical Index

<u>Title</u>	<u>Page</u>
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Service/Total Life	1
Usable on Codes	1

List of Figures

<u>Title</u>	<u>Page</u>
A/P28S-24 Personnel Parachute Assembly	2

Record of Applicable Technical Directives

None

1. INTRODUCTION.

a. This Work Package (WP) contains information for ordering and identifying parts for the A/P28S-24 Personnel Parachute Assembly (Figure 1).

b. Following usable on codes apply to this WP:

A - F-18/A, B, C, D

2. USABLE ON CODES.

a. The usable on codes in this WP refer to the aircraft applications for the A/P28S-24 Personnel Parachute Assembly.

3. SERVICE/TOTAL LIFE.

a. The service/total life information is contained in WP 018 02.

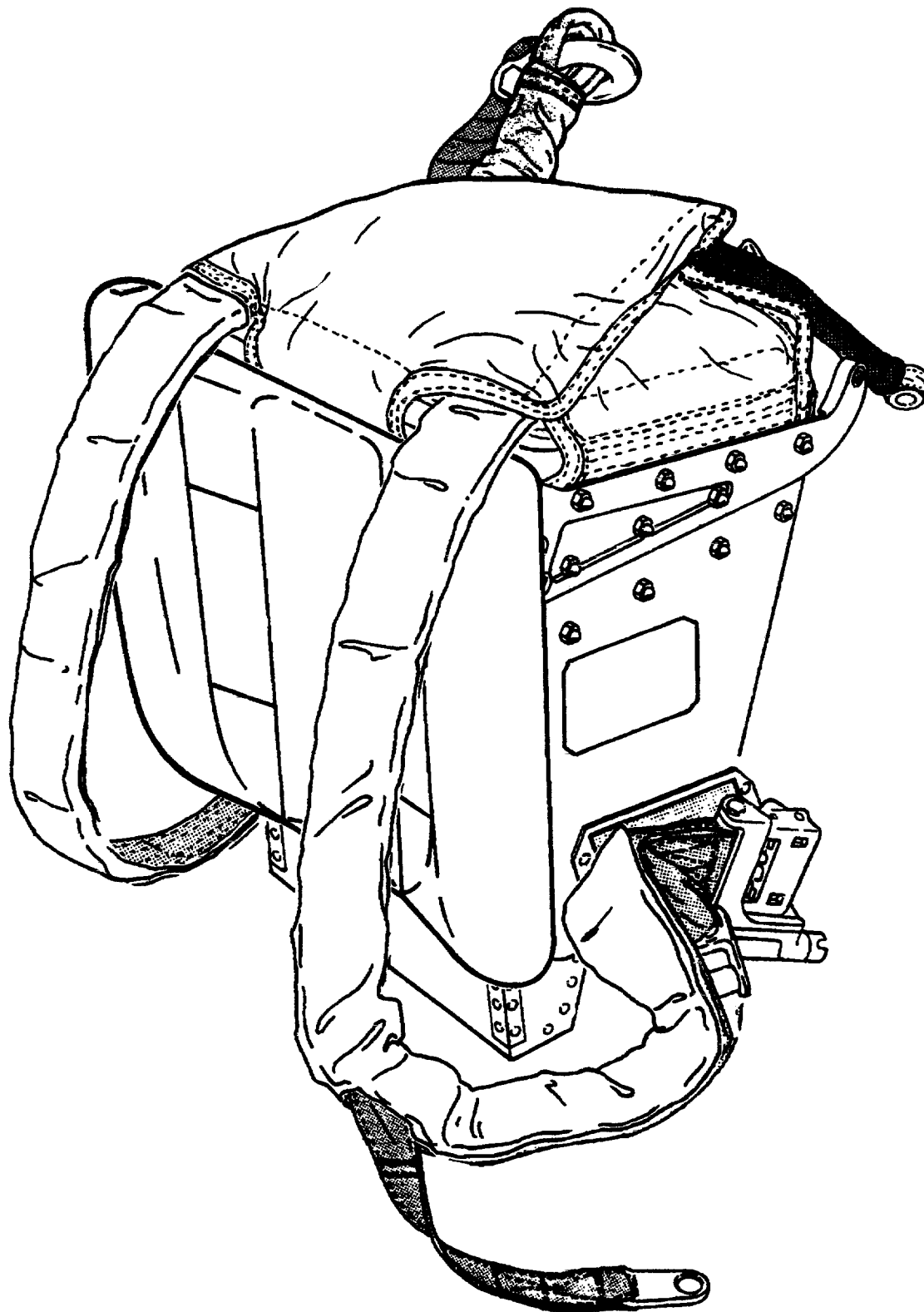
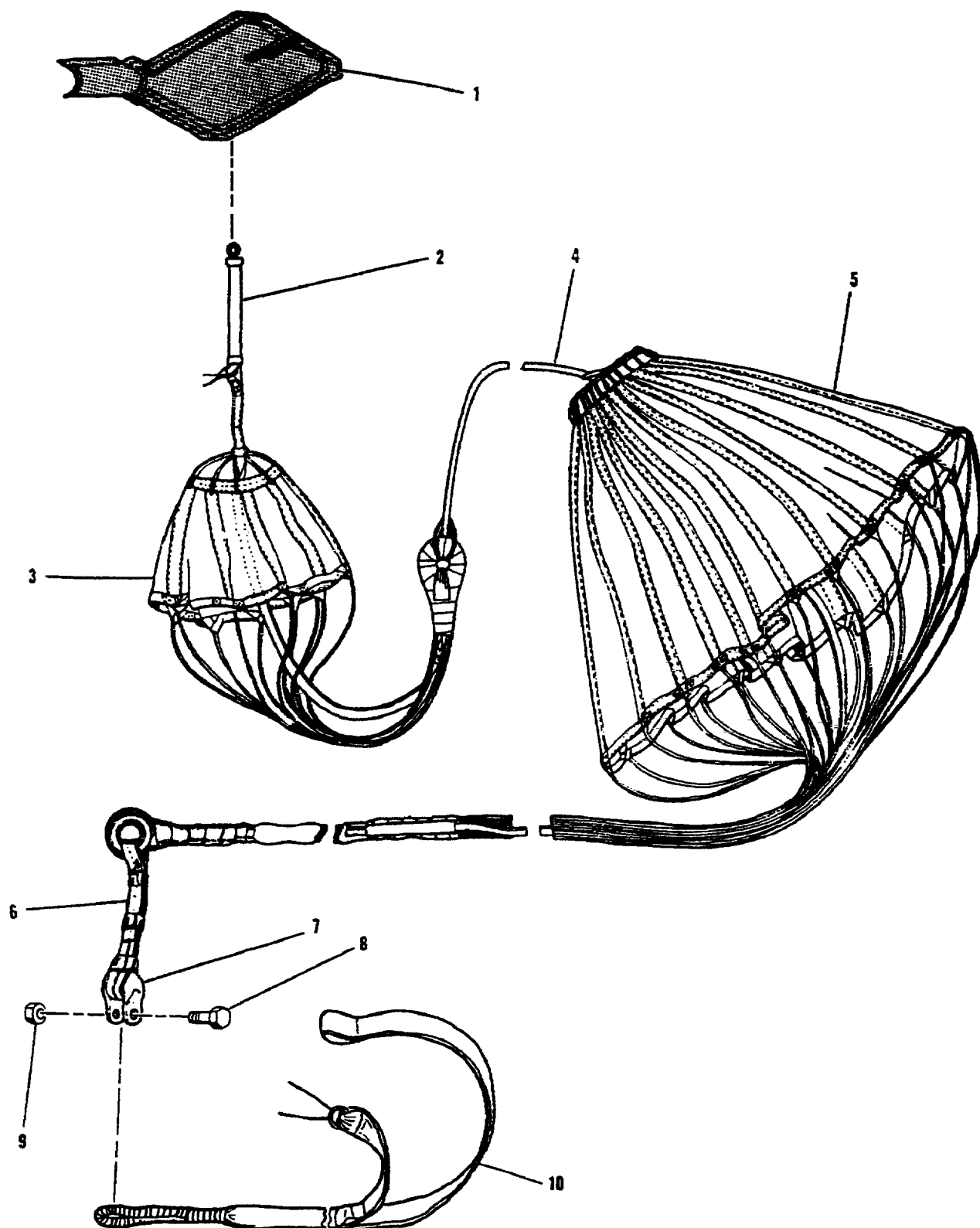
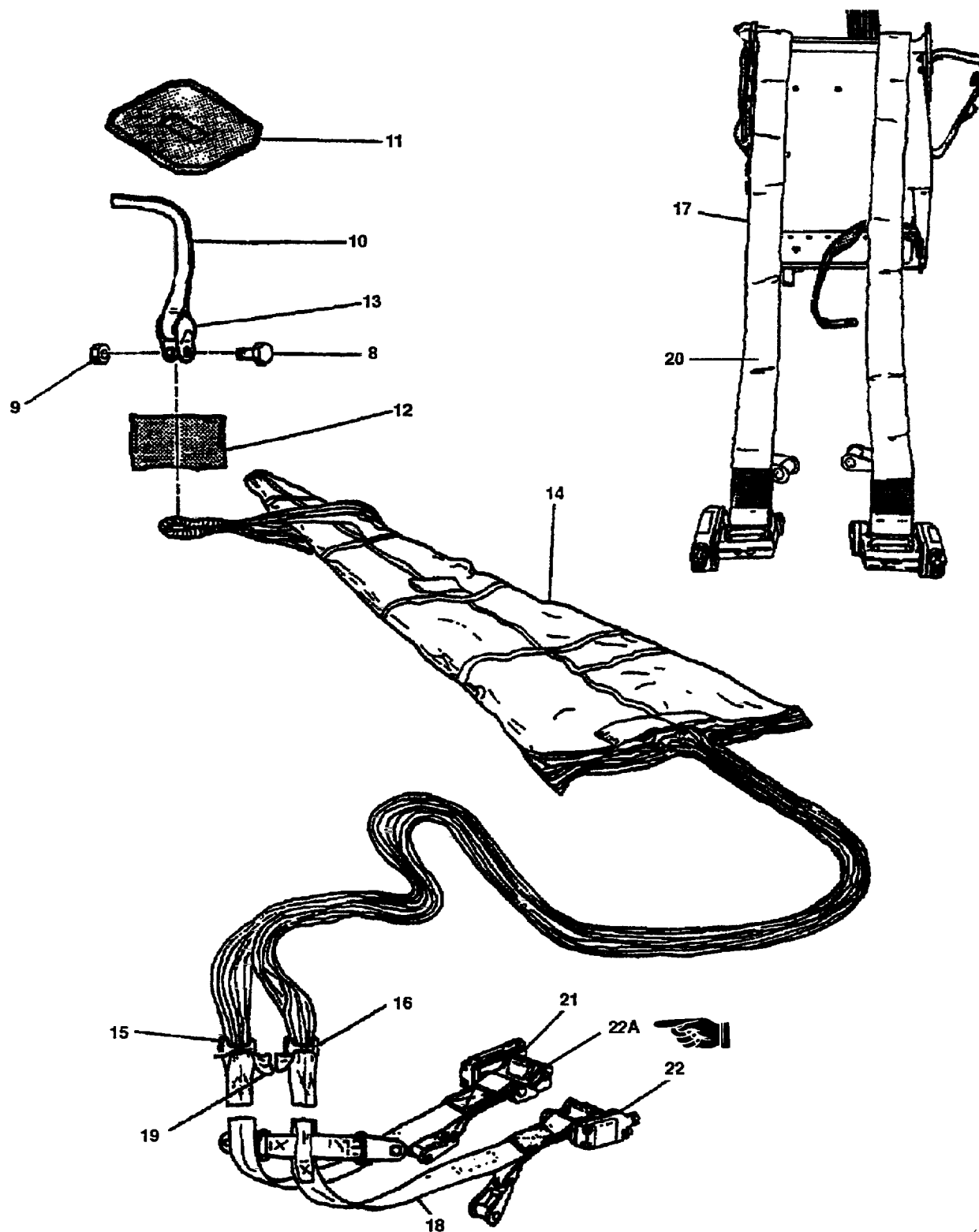


Figure 1. A/P28S-24 Personnel Parachute Assembly (Sheet 1 of 8)



6.2-5781

Figure 1. A/P28S-24 Personnel Parachute Assembly (Sheet 2 of 8)

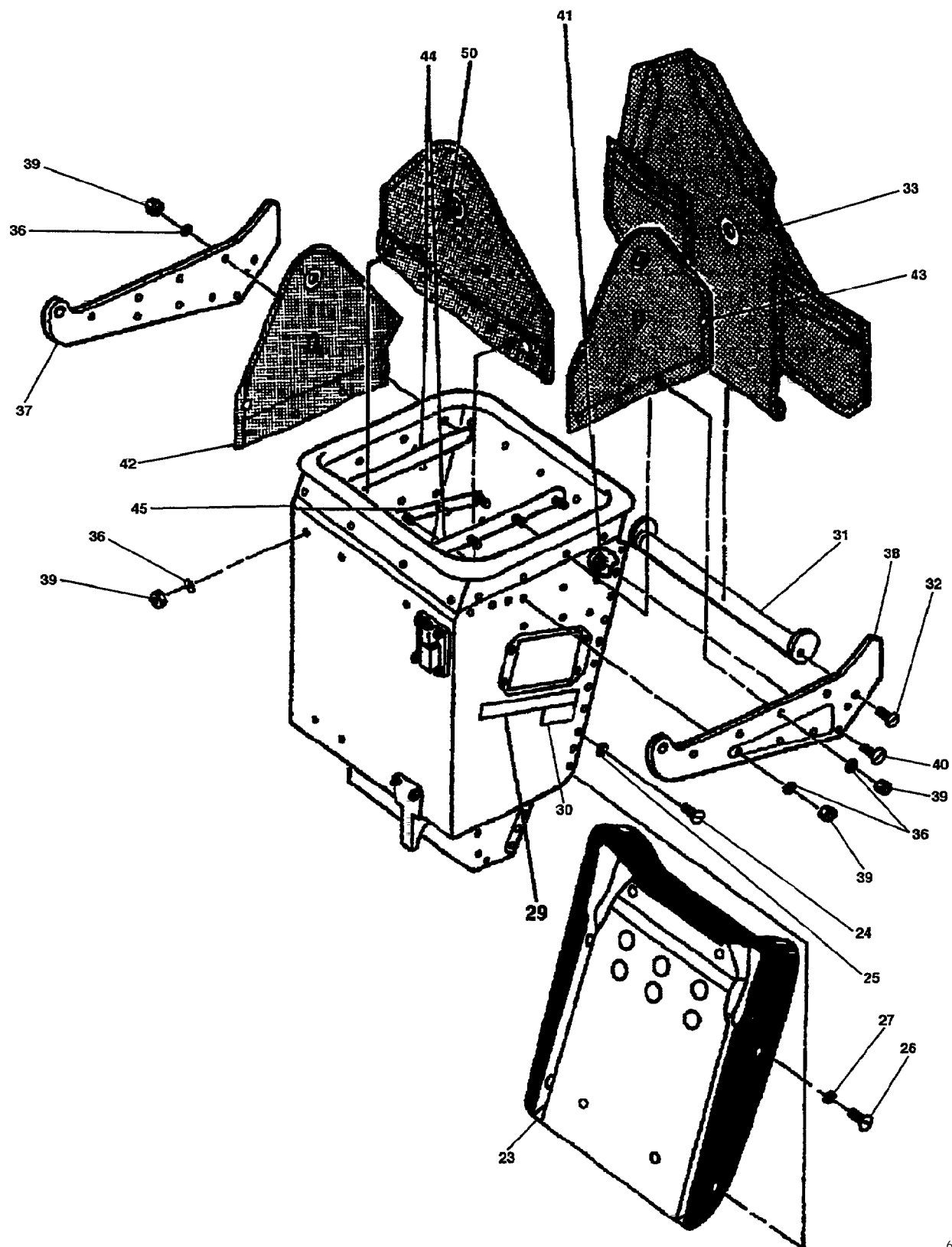


6.2-5782A

Figure 1. A/P28S-24 Personnel Parachute Assembly (Sheet 3 of 8)

INDEX NO.	PART NUMBER	DESCRIPTION							UNITS PER ASSY	USABLE ON CODE	SM&R CODE
		1	2	3	4	5	6	7			
	MBEU10030PA-4	PERSONNEL PARACHUTE ASSEMBLY							1	A	AGOGG
		A/P28S-24									
1	MBEU10935PA	.	FLAP, DROGUE PROTECTIVE						1		PAGZZ
2	MBEU69922-1	.	DROGUE WITHDRAWAL LINE						1		PCGZZ
3	MBEU65690	.	DROGUE PARACHUTE ASSEMBLY						1	*	PCGGG
			22 IN.								
	MBEU34505	.	DROGUE PARACHUTE ASSEMBLY						1	*	PCGGG
			22 IN.								
4	MBEU65685	.	LINE, DROGUE CONNECTING, 12 FT						1		PCGZZ
5	MBEU65691	.	DROGUE PARACHUTE ASSEMBLY,						1		PCGGG
			5 FT								
6	MBEU65699	.	STRAP ASSEMBLY, EXTENDER						1		PCGZZ
7	MBEU65702	.	SHACKLE, DROGUE						1		PAOZZ
		/ATTACHING PARTS/									
8	MBEU11135PA	.	BOLT, SPECIAL						2		PAOZZ
9	MS21083C5	.	NUT						2		PAOZZ
		---*---									
10	MBEU10901PA	.	PARACHUTE WITHDRAWAL LINE						1		PCGZZ
			ASSEMBLY								
11	MBEU11183PA	.	FLAP, PROTECTIVE						1		PAGZZ
12	MBEU11150PA	.	SLEEVE, MAIN CANOPY SHACKLE						1		PAGZZ
13	MBEU66918	.	SHACKLE, MAIN CANOPY						1		PAGZZ
		/ATTACHING PARTS/									
		--*---									
14	MBEU11731PA	.	CANOPY, GQ, D06849, AEROCONICAL,						1		PCGGG
			TYPE 1000								
15	AML147	.	LINK, DETACHABLE CONNECTOR						4		PAGZZ
16	MS20470B2-8	.	RIVET, SNAPHEAD, 0.0625 IN. DIAMETER						4		PAGZZ
17	1979AS510-100	.	RISER AND COVER ASSEMBLY						1		AGGGG
18	MBEU12913PA	.	RISER ASSEMBLY						1		PAGZZ
19	MBEU11232PA	.	STRAP, CROSS CONNECTOR						2		PCGZZ
20	1979AS500-100	.	RISER COVER ASSEMBLY						1		PAGZZ
21	852AS117-3	.	SENSING RELEASE UNIT, PARACHUTE						1		AGGGG
			HARNESS MXU-746/P LEFT SIDE/NOTE 1								
22	852AS117-4	.	SENSING RELEASE UNIT, PARACHUTE						1		AGGGG
			HARNESS MXU-747/P RIGHT SIDE/NOTE 1								
22A	990055-1	.	RELEASE ASSEMBLY, CANOPY/99449/						2	*	PAGZZ
	015-10307-5	.	RELEASE ASSEMBLY, CANOPY/99449/						2	*	PAGZZ
			(USE UNTIL EXHAUSTED)								
23	MBEU75039	.	HEADPAD						1		PAOZZ
		/ATTACHING PARTS/									

Figure 1. A/P28S-24 Personnel Parachute Assembly (Sheet 4 of 8)

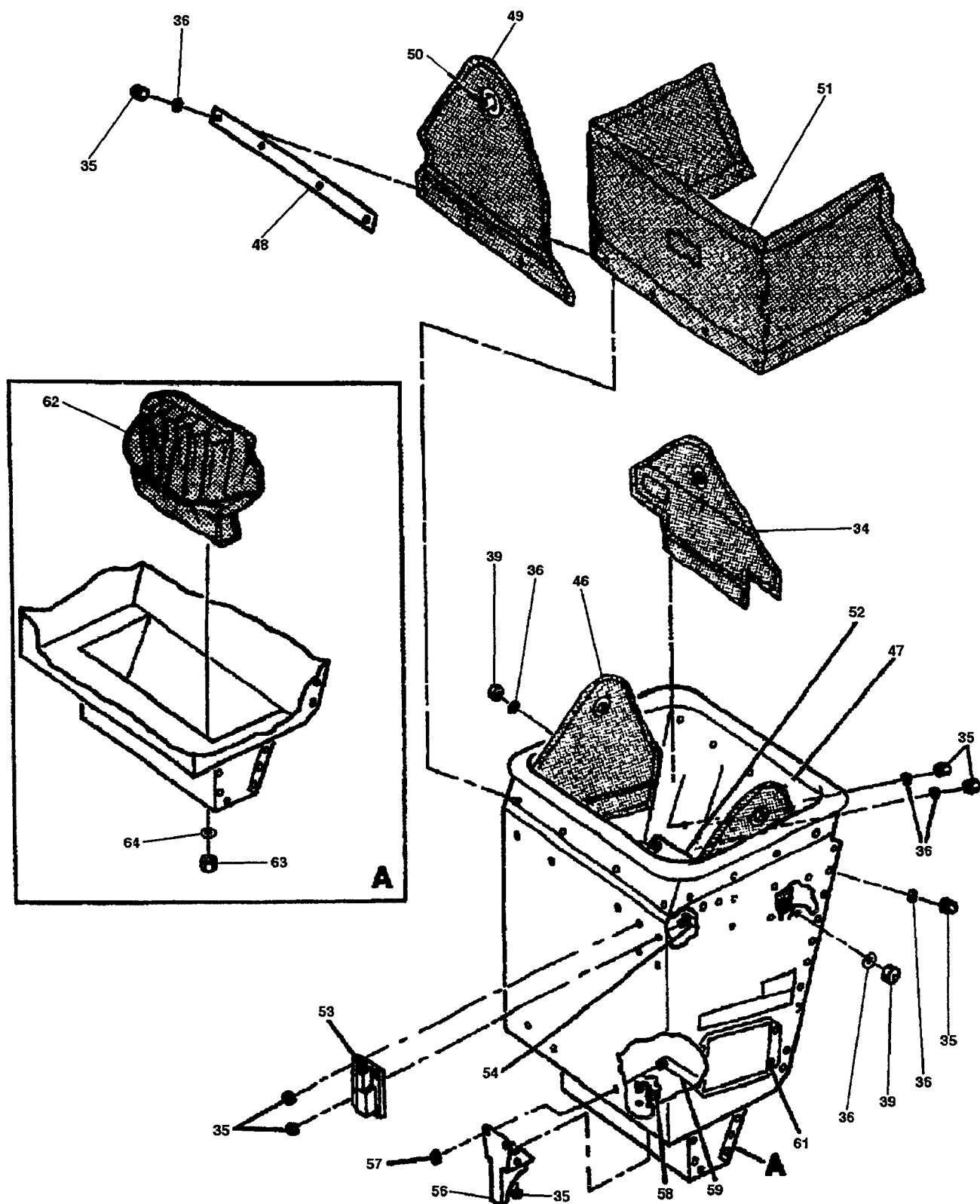


6.2-5783

Figure 1. A/P28S-24 Personnel Parachute Assembly (Sheet 5 of 8)

INDEX NO.	PART NUMBER	DESCRIPTION							UNITS PER ASSY	USABLE ON CODE	SM&R CODE
		1	2	3	4	5	6	7			
24	NAS1218-08E11	.	BOLT	.....					2		PAGZZ
25	MBEU75133	.	WASHER, SPACING, HEADPAD UPPER	.....					2		PAGZZ
26	NAS1218-08E15	.	SCREW, MACHINE	.....					2		PAGZZ
27	MBEU75133	.	WASHER, SPACING, TOP	.....					2		PAGZZ
			---*---								
28	MBEU75020	.	PACK ASSEMBLY	.....					1		PAGGG
	MBEU12081PA	.	PACK ASSEMBLY	.....					1		PAGGG
29	MBEU66473	.	LABEL, WARNING	.....					2		PAGZZ
30	MBEU66468	.	LABEL, ACTUATOR INSTRUCTION	.....					2		MDGZZ
			---*---								
31	MBEU69719	.	CROSSBAR	.....					1		PAGZZ
			/ATTACHING PARTS/								
32	NAS1218-4E3	.	BOLT	.....					2		PAGZZ
			---*---								
33	MBEU69955	.	FLAP, FRONT, OUTER	.....					1		PAGZZ
	MBEU10744PA	.	FLAP, FRONT, OUTER/NOTE 2	.....					1		PAGZZ
34	MBEU11047PA-2	.	FLAP, FRONT, INNER	.....					1		PAGZZ
			/ATTACHING PARTS/								
35	NAS1291-C08M	.	LOCKNUT	.....					13		PAGZZ
36	AN960-8L	.	WASHER	.....					32		PAGZZ
			---*---								
37	MBEU66097	.	CANOPY BREAKER, LEFT	.....					1		XBGZZ
38	MBEU66098	.	CANOPY BREAKER, RIGHT	.....					1		XBGZZ
			/ATTACHING PARTS FOR INDEX NO. 36 AND 37/								
39	F22NKM82	.	LOCKNUT, NYLON CAP	.....					25	*	PAGZZ
	F22NKTm-82	.	LOCKNUT, NYLON CAP	.....					25	*	PAGZZ
			(USE UNTIL EXHAUSTED)								
	MBEU69733	.	LOCKNUT, NYLON CAP	.....					25	*	PAGZZ
40	NAS1218-4E4	.	BOLT	.....					4		PAGZZ
41	NAS1291-C4M	.	NUT	.....					4		PAGZZ
			---*---								
42	MBEU11072PA	.	FLAP, PORT, OUTER	.....					1		PAGZZ
43	MBEU12872PA	.	FLAP, STARBOARD, OUTER	.....					1	*	PAGZZ
	MBEU11079PA	.	FLAP, STARBOARD, OUTER	.....					1	*	PAGZZ
44	MBEU10775PA-2	.	STRIP, SIDE DROGUE FLAP INNER	.....					2		PAGZZ
45	MBEU10770PA-2	.	STRIP, PENETRATOR BACKING	.....					2		PAGZZ

Figure 1. A/P28S-24 Personnel Parachute Assembly (Sheet 6 of 8)



6.2-5784A

Figure 1. A/P28S-24 Personnel Parachute Assembly (Sheet 7 of 8)

INDEX NO.	PART NUMBER	DESCRIPTION							UNITS PER ASSY	USABLE ON CODE	SM&R CODE
		1	2	3	4	5	6	7			
46	MBEU11090PA-2	.	.	FLAP, LEFT, INNER	.....				1		PAGZZ
47	MBEU11093PA-2	.	.	FLAP, RIGHT, INNER	.....				1		PAGZZ
				/ATTACHING PARTS							
				FOR INDEX NO. 47 AND 48/							
				---*---							
48	MBEU10727PA	.	.	STRIP, REAR TOP FLAP SECURING	.....				1		MGGZZ
				/ATTACHING PARTS/							
				---*---							
49	MBEU69959	.	.	FLAP, REAR, OUTER	.....				1		PAGZZ
50	MBEU12358PA	.	.	CLOSURE PIN LOOP	.....				2		PAGZZ
51	MBEU11185PA-2	.	.	FLAP, PROTECTIVE	.....				1		PAGZZ
52	MBEU10876PA-2	.	.	STRIP, REAR DROGUE FLAP INNER	.....				1		PAGZZ
53	MBEU66100	.	.	MECHANICAL LOCK HOUSING	.....				1		PBGZZ
				/ATTACHING PARTS/							
54	MBEU11007PA-2	.	.	STRIP, MECHANICAL LOCK	.....				1		PAGZZ
				BACKING							
55	MBEU10920PA-2	.	.	FLAP, REAR, INNER	.....				1		PAGZZ
				/ATTACHING PARTS/							
				---*---							
56	MBEU11214PA	.	.	BRACKET, BOTTOM MOUNTING	.....				2		PAGZZ
				/ATTACHING PARTS/							
57	MBEU10915PA	.	.	NUT	.....				8		PAGZZ
				---*---							
58	MBEU10912PA-2	.	.	PLATE, BOTTOM MOUNTING	.....				2		PAGZZ
				BRACKET BACKING							
59	MBEU10917PA-2	.	.	STRIP, BOTTOM MOUNTING	.....				2		PAGZZ
				BRACKET BACKING							
60	DELETED										
61	MS20470AD4-4	.	.	RIVET	.....				8		PAGZZ
				---*---							
62	MBEU11140PA	.	.	STOWAGE TRAY ASSEMBLY,	.....				1		PAGZZ
				SUSPENSION LINE							
				/ATTACHING PARTS/							
63	NAS1291-C3M	.	.	NUT	.....				2		PAGZZ
64	AN960C10L	.	.	WASHER	.....				2		PAGZZ

NOTES: 1. Not required for use with the Blue Angels Fight Demonstration Team.
2. Outer Flap may be used after installation of grommet (WP 018 03).

Figure 1. A/P28S-24 Personnel Parachute Assembly (Sheet 8 of 8)

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